

A  
MEDICAL VISIT

TO

GRÄFENBERG,

IN

APRIL AND MAY 1843;

FOR THE PURPOSE OF INVESTIGATING THE MERITS OF THE

WATER-CURE TREATMENT.

BY

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Vivat Apollineis nimium suspecta ministris,  
Vivat Aqua, innumeris sola medela malis.

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## P R E F A C E.

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IN the autumn of last year, during a short stay at Malvern, I was favored with the opportunity of witnessing some of the water-cure treatment in Dr. Wilson's establishment at that place. On my return to London, my opinion was occasionally requested on the propriety of its employment ; but I could not feel justified in offering my advice on the occasion.

I very naturally entertained the wish of obtaining more extensive and accurate knowledge on the subject ; and hence, I resolved on a visit to Gräfenberg, however great the personal inconvenience and sacrifice which I might incur. Also, not being myself in perfect health, I was desirous of undergoing the water cure.

I had seen enough of the treatment to be convinced that it was one powerful for good and evil, and that too much information could not be obtained to give a right direction to the public feeling and conduct as to its reception. Towards this object I am willing to contribute the results of my recent observation and experience.

As usually happens when any novel mode of practice is brought forward, it finds both friends and foes ; and often, too, in such hostile array, that the desire of truth is lost in the conflict.

I take the liberty of recommending to the heads of the profession not to entertain any strong prejudices against the

water-cure treatment ; for, however laudably desirous they may be to exercise a conservative principle on behalf of their patients and of society at large, let them not decide without examination, or pronounce a verdict without a candid hearing of the cause.

In the following pages, I have studied to offer the most condensed view of my subject that it will allow, consistently with my wish of giving ample information. It is true that numerous works on hydropathy have already proceeded from the press ; and some with more varied details than would suit my convenience or inclination ; but I have thought that the inquiry still affords opportunity both for novelty and interest.

It has been my endeavor to afford satisfaction to the physiologist in my explanations on points of science ; and at the same time to render myself sufficiently intelligible to meet the comprehension of the general reader.

*Wimpole Street.*

*July 10, 1843.*

ON HYDROPATHY\*,

OR

THE WATER-CURE TREATMENT.

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THE great interest of a Medical visit to Gräfenberg may be readily conceived, as affording the opportunity of witnessing the water-cure treatment on the largest scale, and of having a free intercourse with Priessnitz, its inventor.

It is undoubtedly a startling proposition, that one born in humble life, without the advantages of much general education, and none of medical, should have brought forward a system professing to supersede, in a large number of disorders, the ordinary practice of physic. The idea may be humiliating to the natural pride and dignity of the learned Physician; but the question is not to be decided in this manner: it is the measures, and not the man, that we have to consider.

I have always been of opinion that a Physician should consider himself a student to the latest period of his life; for the wisest must still have something to learn. The maxim of

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\* I shall chiefly use the plain English term, as being the most intelligible. Hydropathy has been objected to, and Hydrotherapia substituted; but each of these compound terms is incomplete by itself. Hydropathy is not so much amiss as might appear; for the crisis so often sought for, brings symptoms produced by the water treatment.



Hippocrates should never be forgotten, of "the shortness of life, and the length of art."

How difficult indeed is the discovery of truth in every thing, but especially, I think, in the art and science of medicine. From the earliest ages to the present time, various systems have been brought forward, each in turn highly influential or supreme in its sway; and then, meteor-like, sinking into obscurity, and heard of only in the page of history.

Chemistry, the great ally of Medicine, furnishes even a stronger example of the mutability of science. Its principles, with certain exceptions, seem never stationary; or, at least, such changes have been incessantly taking place, that a systematic work of ten years' publication, is to-day of scarcely any value. And yet nature cannot err or vary. Her truths are constant; have existed from the creation; cannot be altered by man; and it is for him to discover where they are hidden. To effect this, he must search aright.

It appears to me, that the subject of Hydropathy is one of the highest importance to the whole of the civilized world; and that its principles and practice deserve the closest examination. It would be the height of injustice in any part of the medical profession to disdain its pretensions because it had its beginning from a humble source. As well might we cease to admire the noble river, in thinking only of the little spring from which it took its rise.

Of Priessnitz himself I shall say a few words, and describe my impression on first seeing him. His countenance is full of self-possession; rather agreeable; mild, but firm in expression; with an eye of sense, and a pleasing smile. The small-pox, and the loss of some front teeth from an accident, impair his good looks. His manners are sufficiently

well-bred. On closer acquaintance, you discover that he is quick in perception; is reflective; prompt however in decision; simple, and clear. This might be expected; for his path is short and direct, having his vast experience for his guidance, and no principles of medical knowledge to reason from, beyond those which he has learnt from a long study of the book of nature.

He inspires his patients with the most entire confidence, and he exacts implicit obedience. In this he is right, for on no other terms can success be obtained. He could not carry out his views of treatment, if the invalid were unconfiding or impatient. The accidental manner in which he entered on the practice has been fully described by other writers, and by none better than Captain Clarige, whose ingenious work was the first general announcement of Hydropathy in this country.

From Jan. 1839 to Dec. 1842, Priessnitz has, according to the published records exhibited at Gräfenberg, treated 5422 patients. The lists commence from 1829, and in that year the number of patients was only 49. Their rapid increase, and the ever rising popularity of this remarkable man, attest the success of the practice. Previously to 1829 he began his treatment with the neighbouring peasantry, and to this humble class he is now always ready to give his charitable help in baths and alms. In further proof of the high estimation of the water-cure treatment in Germany, I learn, from good authority, that there are now no less than fifty establishments in that country.

Priessnitz has formed his complete system by slow degrees, and has shewn, certainly, very great ingenuity and an inventive genius in many parts of his plan. In all, there is method and

good sense. His tact in varying the mode of application is remarkable; and in adapting his treatment to the particular individual, and to the varying circumstances of each case, he displays equally reflection and judgment.

I think that some of the writers on Hydropathy have not expressed sufficient praise and acknowledgment to Priessnitz as the inventor of the treatment constituting a complete systematic plan. To follow in a path is always comparatively easy. It is quite true that parts of the whole plan, and the principles, have been known and practised\* since the time of Hippocrates; and by none more ably and scientifically than the late Dr. Currie of Liverpool. But all that can be quoted from history bears no comparison with the regular systematic whole which Priessnitz has so happily constructed, and by which he has raised for himself an unperishable fame. It cannot be expected that a man devoid of medical knowledge by education should be free from imperfections.

Some acquaintance with anatomy; with physiology, or the laws of the animal œconomy; with pathology, or the knowledge of various diseases; and more especially with good diagnosis; would surely be an advantage to him to possess, if it could be given to him as a superstructure on the foundation which he has built for himself. He never could have made such discovery of the powers of water, if his thoughts and attention had been divided with other studies. It is truly surprising in how eminent a degree his experience and ready

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\* At Malvern, the water of the Holywell, so long as 200 years ago, had a great celebrity for the cure of sores, especially of the scrofulous kind, both in its external and internal use. See Camden's *Britannia*, and Dr. Wall's *Experiments and Observations on the Malvern Waters*.



powers of observation do supply the absence of regular science. Let it not, however, be supposed that he does not reason upon every case that comes before him. The able discrimination which he makes, sufficiently proves his good sense and his judgment.

He has one single theory of disease, which serves for all persons and all disorders; that, namely, of the humoral pathology upon a general principle; not attempting any division of the humours according to the doctrine of the ancient physicians, but contented to believe that in every disease the blood is more or less charged with morbid matter, and which nature is always ready to throw out of the system, if properly assisted in her efforts. He considers that the use of medicine of every kind is a false interference with nature, and tends to disturb and impair her efforts; and that, on the other hand, if fortified and assisted by the agency of water, externally and internally, in conjunction with fine air, abundant exercise, and the avoidance of hurtful stimulants, she will acknowledge the help given, and will in a longer or shorter time throw off the disease, usually rendering a proof of such salutary operation by the production of some kind of crisis; and of which I shall have to speak hereafter.

A more simple idea than this of the essential nature of all disease cannot be imagined, nor one more calculated to mislead the practitioner who makes it his polar star. It is intelligible to the patient also, and fills his mind with ready notions of the inherent cause of his disorder, and the great object of the treatment.

In the example of eruptive diseases, and those produced by morbid poisons, we see, certainly, clear proof of the contamination of the blood; but the impregnation of this fluid

cannot, even in such instances, be discovered by the most accomplished chemist. In ordinary disease, therefore, this hypothesis of morbid blood must be assumed, and cannot be capable of demonstration.

The doctrine of the humoral pathology, purified of its errors, is a valuable one, and entitled to great consideration. I am convinced then we must often make large reference to the blood as the seat of error; but to do this exclusively, or promiscuously, would be alike contrary to truth and science. It does not serve to explain the functional or structural error of the various organs of the body; the diseases of many of the textures; or the state of the organs of the circulation, or of the nervous system.

Happily the real merits of the water-cure treatment do not rest upon the truth or error of this extreme humoral doctrine; nor should I bestow so much attention upon it, if I did not believe that, by being carried out much too far, it must often tend to mislead in practice to a serious degree.

I think that the water-cure measures, in combination with all the other circumstances that favor health, are powerfully calculated to effect an entire alteration in the system, and change the composition of fluids and solids in a remarkable degree. This fact is indeed sufficiently proved by the numerous wonderful cures which have been effected at Gräfenberg, in instances which had bid absolute defiance to the usual means of professional art.

Priessnitz gives another proof of his sagacity, by enjoining, that, in pursuing the water cure, it shall be the sole object of attention; that the patient should be almost always in the open air; take abundant exercise, according to his strength; abstain from study; recreate in cheerful society; avoid every

species of immoral excitement ; and with undeviating strictness pursue the plan which he lays down.

In forming his judgment of the case and of the treatment which it may require, he first hears the statement of the patient, and makes his general survey ; gives directions to the *Badediener* (the bath attendant), and himself makes his visit at an early hour on the following morning. As a general rule, the *abreibung*, or rubbing wet sheet, is first applied ; and from the influence of this alone, or the additional effect of the shallow bath used immediately after, he forms his judgment of the condition of the skin, and the degree of reactive power. The skin to him is what the pulse is to the physician. He also judges well of all the external characters of a person ; the physiognomy ; the muscular condition, &c.

I shall now speak of the several means and processes used in the water cure ; and first,

#### OF THE LEIN-TUCH, OR WET SHEET TO LIE IN.

This is a sheet of coarse linen, suited to hold water the longer ; and it is wrung out on a pole ; but when used for fever, it is made more wet than usual. It is evenly laid on the large, very thick blanket, and being closely applied to the body, as an envelope from the neck to the feet, the blanket is with equal care adjusted, so that the packing resembles a compact bale of goods. Lastly, the packing is completed by the covering of a down-feather\* bed and a thick quilt. The first reclining on the sheet is disagreeable ; but almost immediately all sense of painful coldness passes away,

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\* A tick is about half filled with the best geese feathers stript from the stalks, and its pliancy is admirably adapted for this purpose of close packing.



to be succeeded by a refreshing coolness, and then an agreeable warmth; which, if the patient remained too long, would increase so as to end in perspiration; and which is very seldom recommended. The average period is three quarters of an hour. Under some circumstances,—as, for example, catarrhal fever,—perspiring would be desirable, more or less; and the time of lying would be extended to an hour, or more. But the more usual practice in fever is to change the sheet as soon as becoming warm, and this with any frequency necessary to bring about a cool surface. This is usually the first process of the day, and is repeated or not according to circumstances\*.

#### RATIONALE OF THIS PROCESS.

As on all other occasions of the sudden application of cold and wet to the naked body, the blood is suddenly repelled from the vessels of the surface to those deeper seated, and the heart, cognisant of this by sympathy, exerts its force to restore the cutaneous circulation, which is called reaction. This is the more easily effected, as, from the body being surrounded by the close covering of a thick blanket, and the other articles, all air is excluded, and free evaporation from the surface is entirely prevented. The warmth so agreeably produced is therefore to be ascribed to the operation of the vital force, exerted under such favorable circumstances.

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\* With a very delicate patient, I suggest that for the first and second time the sheet should be pressed out of water at 64° and 60°, as introductory to the cold, which may be stated 50°; but when this treatment is employed in acute rheumatism, or acute gout, circumstances in which it is torture to the patient to be moved, I conceive it would be advantageous to use three wet sheets at the same time, instead of one, as retaining much longer a refrigerant power; also to apply a long wet towel from the arm-pit downwards on each side, so that no part of the body may be free from the contact of the wet linen.

The opposing influence of this is the refrigerant quality of the cold sheet, and which, with very delicate persons having a feeble circulation, counteracts the tendency to comfortable warmth which almost universally prevails. When this happens, more warm covering should be used; and the effect may be tried of moving the arms and legs up and down, as actively as the restrained position will allow.

OF THE RUBBING WET SHEET (ABREIBUNG).

A large sheet, of the same coarse quality, fitted for holding water, and serving well for friction, is here used. The sheet is pressed, not wrung, out of water always cold, and sometimes it is allowed to be dripping. The patient standing ready, it is dexterously thrown over the head, so as to create surprise and a slight shock; and instantly the most active friction is used by the assistant (*Badediener*) behind, and by the patient, or another attendant, before; and this is continued from two to five minutes, when the skin becomes much reddened, and a considerable sense of warmth is obtained, and which is pleasantly confirmed by the subsequent rubbing with a dry sheet.

This is a very admirable species of cold bath; and, as such strong friction with the coarse linen accompanies the application, it is in no slight measure a counter-irritant. It has, therefore, a different action from that of the shower bath, which causes a more sudden and violent reaction, from which some sensitive persons experience great disadvantage, especially as regards the head; and this even if the fall of water be not upon the head.

The convenience of this remedy, the quickness and facility with which it is procured, is another recommendation of its use. It is applicable in various circumstances of indisposition,



as I shall mention cases to show, and is one of the processes with which the patient always begins the treatment. Sponging the body comes the nearest to it, but it differs in these respects: more evaporation takes place from the surface during the exposure in sponging; and active friction cannot be used at the moment of the application of the water, as with the sheet. If employed for refreshment after heat and fatigue, the sheet might be pressed out of water at  $62^{\circ}$ ; or also with a very delicate patient, as introductory to the lower temperature. I have with much satisfaction, in several instances, directed another modification of this process, as introductory to the fuller treatment; viz. the rubbing of different parts of the body in succession, by means of a very large coarse towel pressed out of cold water (in some cases a little tepid at first), with the injunction that one part is rubbed dry before proceeding to a fresh part.

#### OF THE SWEATING BLANKET (DAS SCHWITZEN IN DER KOTZE).

The whole body, including the neck, is most carefully and accurately invested with the large thick blanket, and the packing finished with the feather bed and wadded counterpane. If the patient be liable to pain or congestion of the head, a wet bandage to it is proper, either in the first instance or in case of feeling such inconvenience during the process. Those who are slow to perspire are instructed to move the hands and feet in a quick shuffling manner. More blanket covering may be required. If the feet are difficult to be warmed, I advise flannel socks. The first of the morning is to be preferred, when the digestion of the food is over; but if success in perspiring cannot be obtained, the afternoon, immediately after warming exercise, must be chosen. Sometimes, four or more hours are passed before

perspiration breaks out. When taking place freely, the patient may have cold water offered to him as drink occasionally, and fresh air be admitted into the room. The period for carrying on the perspiration is prescribed; and when terminated, the use of the tepid shallow bath, solely, or previously and also subsequently to the cold plunge bath, succeeds. It is only the practised patient who goes at once into the cold bath; but, with either, it is a rule, first, to dash some water over the face, head, and chest. The envelope of the blanket, in the progress to the bath, is so exactly close that there is not the least exposure to cold. If a cold plunging bath cannot be had, the best substitute is the shallow bath and cold affusion from small buckets; one or two, or more, affusions being used, according to circumstances. In the excited state of the circulation, with a heated and perspiring skin, the transition to the tepid or cold water is made with perfect safety; so much elevated is the animal heat. Dr. Currie shewed the safety of cold affusion when the animal heat was raised above the natural standard, which may be stated at from  $94^{\circ}$  to  $98^{\circ}$ , varying in different individuals; but as an average,  $97^{\circ}$  in health.

While lying in the blanket, so entirely excluded from the air that no radiation of caloric can take place in this non-conducting medium, the animal heat is always more or less raised, the vital force is stimulated, the pulse becomes fuller; and there is a sort of temporary fever. Hence, in inflammatory disease, or even in persons of very full habit, if laboring under any congestion, there may be too much tension or irregularity in the circulation to allow of this treatment. If perspiration were not produced, disadvantage would follow. I have made numerous examinations of the animal heat under

this process. I will now give an example. A. B. temperature at the tongue (the bulb of a delicate animal heat thermometer, lodged in the hollow of the tongue by the frænum, and steadily held), 15 minutes before going into the blanket, at  $4\frac{1}{2}$  a. m. the patient then in bed,  $98^{\circ}$ ; when in the most heated state before the breaking out of perspiration,  $100^{\circ}$ ; ditto when fully formed; after much perspiration,  $99^{\circ}$ ; after returning from the plunging bath,  $97^{\circ}$ .

The sweating in the blanket is a different result from that produced by the vapor bath, and is a far more favorable process than it for the after-treatment of the cold bath. In the use of the vapor bath, the stimulus of heat is more derived from without: the skin becomes as it were fomented by the hot vapor, and relaxed; nor can the temperature of the whole body by any management be so equally maintained as in a blanket; in which, heat is brought to the surface from within by the exertion of the vital force, and suffers no check to its uniformity. In this manner, the body is admirably fitted for the beneficial operation of the tepid or cold bath. I dwell on the distinction, because some persons argue that the vapor bath is quite as useful as the blanket, and a more elegant mode. I am not of this opinion. Lately, I knew an instance of a female receiving a shower bath at  $70^{\circ}$  immediately after being subjected to steam at  $100^{\circ}$  for twenty minutes. In the short interval, evaporation had rather cooled the surface: there was an absence of reaction, and a severe paroxysm of fever followed.

Priessnitz does not employ the sweating blanket so much as formerly, having a great regard to the strength of the patient; yet when he can reckon on this with confidence, and always when he has it in view to elicit from the system any



old morbid virus, or extract latent mercury, he does not hesitate to use this treatment, and freely. None undergo it more than the gouty class of invalids.

#### OF THE SEVERAL BATHS, AND THE DOUCHE.

To save repetition, I will premise that the temperature of water signified at Gräfenberg by the term tepid, is from  $58^{\circ}$  to  $68^{\circ}$  of Faht. (Reaumer, the scale used there); and the medium, and which is most commonly employed for the shallow tepid bath,  $62^{\circ}$ . This, called *Das abgeschreckte Halb-bad*, may be an oblong tub, five to six feet in length, and upwards of two in width, containing, for the purpose, only from three to six inches of water. The newly-enlisted patient, after quitting the *lein-tuch*, enters this bath, and is diligently rubbed before and behind; taking himself a part, if able; if not, having more assistance, and for a longer or a shorter time, as circumstances may direct; but, in the beginning, about two minutes. In many circumstances of disease, especially when inflammation prevails, if used with great continuance, and modified also in temperature, it is a most valuable and convenient remedy. The power of reaction is never hazarded, and the state of the patient can be precisely watched under the process.

*The Plunging Bath (Wannen-Bad, or Full Bath)* is a very capacious vat, with fresh spring water, of the temperature, as I found it,  $44^{\circ}$ , constantly flowing in and out so freely, that it soon changes itself. Most patients soon arrive at the use of the cold immersion; and weak or very nervous persons, only, fail to furnish a sufficient reaction for this admirable stimulant and tonic. The morning early is the

fittest time generally; but it is used very commonly a second time in the day, a few hours after dinner, which at Gräfenberg takes place at the hour of one, and with water as the sole beverage. In other circumstances, late in the day, the circulation would not allow of such disturbance. Those who are subject to head-ache, arising from congestion, are precluded from the use of the plunging bath. I may at least state this as a general fact; but it is a remedy which soon reveals its effects, as to its agreement or the contrary.

*The Hip or Sitz-Bath*—The water rising to about the navel. This is most usually employed, in England, really tepid or warm; viz. from 80° to 96°; or, if directed to be used cold, it is only for one or two minutes' sitting; but at Gräfenberg it is a very different thing. The temperature is rarely higher than 62° or 64°; and the time first appointed, a quarter of an hour; while, according to the case, the temperature may be the natural one, 44° up to 58°, the time extended even to an hour; in that case changing the water once or twice, in a particular case. The patient only feels the shock of the cold very temporarily: the quantity of water being so small, it is soon raised a few degrees; and a small part of the body only being immersed, a reaction is for the most part readily furnished; but the patient is not to sit passively still: he must keep up hand-friction both of the abdomen and the back; and, on quitting, should restore the warmth of surface by due drying and rubbing. The sitz-bath, employed in this decisive manner, is highly remedial in many kinds of disorders affecting the parts situated within the male and female pelvis. It tends greatly to correct a disordered state of the digestive mucous membrane, and to amend wrong action in the intestinal canal. This bath is also a valuable



auxiliary remedy in acute inflammation of the lungs, liver, bowels, &c. In these cases, it is employed tepid ( $62^{\circ}$ ) for a long time, varying, according to the degree of the disease, from three quarters of an hour to an hour and a half; but the water should be several times changed, and gradually lowered. The cold sitz-bath, in conjunction with frictions, by inducing a freer circulation in the viscera of the pelvis, has a derivative influence, relieving habitual head-ache and congestion in the vessels of the head.

*The Head Bath (Das Kopf-bad).*—The mildest mode of using cold water for the head is by its rapid and free application, by means of the hand, from a basin, and rubbing it most freely till the skin glows; and the water should be applied with great freedom to the nape of the neck, so as to produce a strong sense of temporary chill in that part. But the *Head Bath*, so called, is according to the following process. A blanket or rug is laid on the floor, on which the patient should extend himself, and place the head in a broad shallow basin, about a third part filled with cold water. He is instructed to lie with the back of the head only in the water; or, also on each side of the head in succession; each part for three, five, or more minutes, as the case may require; at the conclusion of the process, using drying friction with a towel. In the side application only, the patient may sit in a chair and have the basin on a table.

The intention of this remedy is to strengthen the vessels and nerves of the head, in cases of head-ache; and as part of the treatment for deafness; and to lessen the susceptibility to catarrh; which object is further assisted by sniffing up cold water several times in the day with such force as to carry it back into the posterior nostril; and this is used also for the relief of acute catarrh itself.

*The Foot Bath (Das Fuss-bad).*—This term would perhaps imply immersion above the ankle, as is usual in England; but it is quite different. The quantity of water in the vessel should be small, from one to three inches. The soles of the feet are to be especially rubbed with the water; but also the whole of the feet, ankles, and even legs, if they be weak and subject to swelling, until a sense of glow be felt; lasting from five to twenty or thirty minutes. With delicate persons, it may be used at first tepid, from 60° to 64°. When the patient has not assistance, he may rub one foot actively on the other, instead of constantly stooping to use the hand. Great attention should be used afterwards to render the parts quite dry and comfortably warm.

This method is used to relieve and conquer the coldness of the feet which so commonly affects persons having an irregular circulation; and is an assistant remedy for the relief of head-ache depending on the same cause. Used as a custom every morning throughout the year, it is well worthy of observance.

#### PARTIAL BATHS.

This term applies to the several local applications of water, as the eyes, ears, &c.

#### OF THE WET BANDAGES (UMSCHLAGS).

They are of two kinds, and are called stimulating and heating, or cooling; in the first case, the wet part of the bandage is covered with the continuation of that which is left dry; in the latter, the whole compress is wetted, and, not being covered, is left to free evaporation. For example, I saw the case of a large painful boil on the hand, in progress of supuration. On this, the wetted part of the bandage, covered by the dry, was constantly kept to serve as a water poultice;

but above, on the wrist and fore arm, a wet cloth only, never allowed to be dry, or even warm ; on a just surgical principle of producing a sedative action on the vessels and nerves contiguous to the seat of disease.

The long body bandage (of coarse linen), having enough of it wetted, and well wrung out, to surround the whole abdomen and back, covered by about two folds of the dry part, is of such general application, that it is directed for all, except the very few who have no complaint whatever to make of their digestive functions. It should be drawn as tight as it can be conveniently borne ; for, otherwise, it would create a disagreeable chill, from the quick evaporation, owing to the access of air. Exercise should be used after it. If, notwithstanding this, the back should remain too cold, let the front part only of the bandage be wetted. But this application, at first so unwelcome, after a time is liked, rather than the contrary. It is to be renewed whenever becoming dry. This is a rule. By the majority it is worn in the night as well as in the day. In proportion as irritation may prevail in the mucous membrane of the stomach and intestinal canal, this simple application is of marked utility. I cannot doubt that it has a favorable influence in regulating the function of the bowels ; and in helping to allay morbid irritation in any of the viscera, when disordered, that are situated within the abdomen and pelvis. It is in some measure a counter-irritant.

But (the humoral pathology never forgotten) in the use of the body umschlag, another effect is desired, that of drawing out the internal humors to the skin ; and it is of frequent occurrence to meet with one or other kind of rash around the body, sometimes surrounding it as a great belt ; or a boil or boils may visit this part. Such appearances are always hailed with satisfaction.



## THE DOUCHE.

This is the most active of all the water-cure processes, if used with freedom, when of large volume, and having a strong fall; and the force of the treatment is further proportioned to the manner in which it is received, and the time. The coldness of the water is another point of consideration. A small fall resembles the action of a good forcing pump, with the difference that the projection is usually horizontal in the latter; and it is right to add, that the cautious use of a moderate douche may be even a milder remedy, and induce reaction more readily, than the cold plunging bath. In the wood at Gräfenberg, I found the temperature of the gentlemen's douches as follows: Concordia, the strongest, about twenty feet fall, and of the size of a man's wrist,  $54^{\circ}$ ; the stone douche,  $48^{\circ}$ ; and the Ferdinand,  $44^{\circ}$ . The Concordia spring runs nearer the surface than the others, and is most affected by the weather.

There is some tact in douching; and many show this, by practice, very amusingly. The hands must be held high up and spread above the head, to protect it from the fall of the mass of water, and then the spine, loins, and several limbs are to be subjected to the powerful stream. At the first moment, determination is required; but, the immediate shock being encountered, the rest is easy, and the majority are more inclined to exceed than to abridge the time prescribed, which, beginning at two minutes, may afterwards extend, in many cases, to ten; but, as an average, may be stated at from three to seven minutes. It stimulates the circulation and the whole muscular system in a very high degree. The action of the heart is much disturbed, and is slower to recover itself than

after the plunging bath. It greatly depresses the animal heat, if long continued. I made numerous examinations, and never found it affected less than one degree. One gentleman, who had regularly douched through the winter every day for eight minutes, received, as was his custom, some of the direct fall on his head, and, although so used to the treatment, his animal heat was lowered four degrees.

An excessive employment of the douche is, therefore, not only too sedative in its agency as *cold*, but, by its disturbing force, it too much agitates the nerves; as may be discovered by palpitation or fluttering of the heart, tremors, disturbed sleep at night, &c. In other instances, it may cause feverish irritation; but when this is connected with crisis, its use is rather encouraged than suspended. It is a powerful rubefacient, as is made manifest by the heightened appearance of the crisis rashes, which I have seen variously to represent measles, scarlatina, petechiæ, shingles, &c.

Strong persons mention that they obtain the best reaction from the douche in the coldest days of winter, when the attendant has first to break away the ice; but these hardy proceedings are not for the weaker invalid. In cases where the use of the douche is of great consequence, Priessnitz orders the patient to use it twice a day, preferring shorter douching at a time to a long one. If the outbreak of a rash or boil be produced by a sense of burning and itching of the skin, the douching is to be rather increased than lessened; but when these symptoms are accompanied by a sense of weakness and languor, and by much nervous irritation, it is to be either suspended for a few days, or used more moderately.

Very free exercise should be taken both before and after the douche; and especially on a cold day: for in proportion



to the warmth of surface so induced, does it act the more favorably. The patient should wait a little after exercise, for the heart and lungs to become quiet, before using the douche. Water to be drunk freely after douching, not before.

I shall further explain the effects of all the processes in the narration of the cases which I shall offer.

#### OF WATER, AND THE DRINKING OF IT.

In the formation of any hydropathic establishment, water, as to its quantity and its quality\*, must be the first consideration. It should be pure as Nature ever presents her streams; and abundant, so that the supply for douches and plunging baths may be most free and constant. The drinking of a large quantity of water daily, unless of great purity, would be calculated in every way to produce injury. We will consider its use when unexceptionable in quality. At first sight, it might perhaps appear a very innocent proceeding, at least, to drink of Heaven's best beverage without restraint; but there is a wide difference in taking water copiously to relieve thirst, and to swallow it, by prescription, in a compulsory manner.

The average daily quantity first directed by Priessnitz is from eight to twelve glasses, the glass holding from ten to eleven ounces, as it is usually filled; and twenty ounces are to be reckoned for the pint. He commonly says to his patient, "Do not oppress your stomach, although I wish you to drink as much as you can conveniently." The largest quantity is always taken before breakfast; and it is most surprising to wit-

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\* I examined the water at Gräfenberg with all necessary tests, and found it of remarkable purity.

ness the enormous amount which some will swallow. But with this, they will take active walking exercise over the mountains for two hours. None should be drunk while the body is very cold ; and never in much quantity, unless exercise be freely taken. Not only would the sedative action of large draughts of very cold water on the stomach be very unfavorable, but also it would cause a temporary fulness of the blood vessels, that might be attended with serious consequences ; as I shall relate cases to shew. The second time of drinking freely is between breakfast and dinner : during dinner, moderately ; none for some time after ; and, to make up the prescribed quantity, as may be most convenient. In the morning early, the water has an obviously useful effect in clearing the stomach by free dilution, downwards in general ; but, when there is disorder, acting for a time usefully in causing a discharge, by eructation or easy sickness, of acrid matter, acid, greenish, or yellowish. It promotes the action of the bowels ; and is the greatest agent, with the rest of the treatment, in superseding the necessity of aperient medicine, however habitually it may have been used. Its free action on the kidneys renders often much benefit by diluting the urine usefully ; and, instead of causing distress to the bladder, even should its mucous membrane be in a state of chronic disease, it produces great relief to its function. Further in unison with exercise, it tends to produce salutary perspiration. At the dinner meal, in moderate quantity, it very notably assists digestion ; far more happily indeed than fermented liquors\*. At Gräfenberg, water and milk are the only fluids

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\* If, from the force of long habit, with advanced years, or from really defective nervous agency, any stimulus be required, the most proper kind is from one to two small glasses, not exceeding, of the soundest wine after dinner.

drunk. The advantages of drinking water in the way I have now mentioned are indisputable, if the quantity be confined within certain bounds; but the excess committed by many persons at Gräfenberg is a matter that calls for the strongest criticism. It is easy to point out what would be the safe and proper medium, but more difficult to define the quantity that tends to certain injury. This also must be relative to many circumstances. It is, however, a subject of so much interest and importance, that I cannot refrain from giving it further discussion.

Water derives much of its tonic quality from its degree of coldness. I should wish to find the spring, even in summer, under 50°. In the interesting conversation which I enjoyed with Liebig (for an account of my visit, see Appendix), I learnt his opinion on the use of drinking water in the water cure. He considered the purity of the water to be of the utmost consequence; that its quick absorption would not otherwise take place; and, if having two per cent. of saline matter in its composition, that it would pass to the bowels; but if of proper purity, then that 8.10<sup>ths</sup> would in the shortest time pass off by the kidneys: and when this happens, and the patient does not experience the smallest oppression, a large quantity may be drunk without harm. Spring water, such as I am describing, has, in the atmospherical air which it contains, 33 per cent. of oxygen; that of the atmosphere having only 21; and hence the Professor thinks, as I understood him, some of the advantages afforded. I remarked to him that in the most dilute urine, I found the evidence of saline matter, and that litmus paper was distinctly reddened, and asked him if he thought that any injury would arise from such a free carrying off of the salts of the blood? He thought that the compen-



sation would be easily made by the use of the salt in the food; which might be a little increased with reference to this point. He could not help entertaining the idea of a shorter course\* from the stomach to the kidneys, than by the general circulation, so very immediate is the absorption of pure water. I submitted to him that I did not think this explanation necessary: for in the absorption of chyle, that important fluid does not become blended with the blood till after many rounds of the circulation; as we see demonstrated by the chylous appearance of the serum of the blood, when drawn some considerable time after the dinner meal; and as the water is wholly innutritious and not required by the blood, its passing away immediately might be expected. I observed to him that I did not think it probable that the constitution of the blood would be changed, in regard to its relative proportion of water, which has been estimated at from 90° to 95° per cent., by the introduction of so much drink; and that we must not argue of the influence of the water on the blood in the living vessels, by what takes place in an experiment made on that in a basin. He appeared to coincide with me in opinion.

Yet I am persuaded that a temporary plethora of the circulation is produced by the large ingurgitation of water, and that, without exercise, inconvenience would follow; but when

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\* This was a favorite opinion of the late Sir Everard Home; but I believe it has never received support from other physiologists. Since the discovery of the extreme rapidity of the circulation, by Hering of Stutgard, confirmed by Mr. J. Blake of London, taken with the experiments on imbibition by Majendie, there is much less difficulty in comprehending the very rapid arrival of fluids in the bladder from the alimentary canal.

half-pint draughts are taken, with intervals filled up by active exercise, attended with a ready and efficient action of the kidneys, a great quantity may be drunk with impunity; and especially when the patient is sensible of pleasure from it rather than the contrary. However, such is the consequence of a temporary filling of the vessels, that I should always object to a large quantity of water being drunk in any case of hæmorrhage, that ought to be restrained rather than promoted.

Even in hæmorrhoidal discharge, if the blood be arterial, it requires prudent consideration to determine the extent to which it shall be allowed to go; for it is not as with venous blood, in the flow of which Nature may be left to herself; but much bleeding from one or more arteries will in a short time depress the strength, and more or less impair the nervous energy.

As a general rule for the drinking of water, in pursuing the water cure, I would offer the following. The morning early is the time for the largest quantity: more between breakfast and dinner; a moderate portion only at dinner, for it would distend the stomach unfavorably, and tend to the dilution of the gastric juice; none till about two hours after dinner; and not much before going to bed. The *quantity* must have reference to many circumstances, and to none more than the activity of the kidneys and the amount of exercise. I would propose, in regard to total quantity per diem, one quart as the minimum, and six or seven quarts as the maximum.

*Of Diet.*—The water-cure treatment would not allow of a low diet: that is, animal food should be eaten to the extent of the appetite once a day. I need not expatiate on the value



of wholesome diet for an invalid under any circumstances; and the regulation of which must always assist the recovery. When the digestion allows of the free use of milk, a purer nourishment cannot be found. It would appear to agree remarkably well at Gräfenberg, for it constitutes the fluid part of the breakfast and supper for every one; its quality and freshness, warm from the cow, being the choicest. It is used from the bowl without dilution. In other situations, where pure milk may not suit the digestion, it may be tried in dilution with tepid water, with or without a little sugar; and if then it do not suit the individual, cocoa infusion, with a little milk added, must be substituted.

In regard to the dinner meal, it is not necessary to specify particular articles. Plain, wholesome, well-dressed food is the best, such as is good for every one at other times. Vegetables to be eaten sparingly. Such diet as tends to the formation of the fittest chyle is the most to be recommended, and consequently whatever is greasy; and, on the other hand, what is sharp, such as pickles or harsh salads, should be avoided. The strict rules of diet, which enjoin abstinence from pastry and sweets, and spices, coffee, tea, wine, and all fermented liquors, will serve well for the water cure.

*Exercise, &c.*—It would be a waste of words to argue at length in recommendation of free exercise in the open air; and that salubrity of situation is a matter of very great importance in the furtherance of the water-cure treatment. Indeed, exercise, so valuable to health at all times, is here indispensable: for neither before nor after each process should the body be allowed to be cold. If the patient have not strength, for the purpose of warmth always, he should obtain it by walking up and down in a warm, but well-ventilated

apartment. But no plea of pretended incapacity must be allowed. Practice with determination will soon give facility; and the early morning walk, especially with the sun mounting in the horizon, and all nature awaking to refreshment, joy, and gladness, will be a delightful exchange for the pillow and the walls of a chamber. It is highly useful to ascend hills; for, by quickening the respiration, the animal heat becomes much increased. In my late essay on the Pathology of Consumption, I have shewn that, in ordinary quiet respiration, a man, having a good chest, does not receive more than from two to two-and-a-half cubic inches of air at each inspiration; but, by one the most prolonged of which he is capable, he can take in no less than two hundred and twelve! This then serves to shew the advantage of active exercise, and that the level path should not always be chosen.

At Gräfenberg there is every temptation to be abroad, from the romantic beauty of the situation\*; the fine air; the necessity of doing duty; the force of example; and the sensible benefit to the strength and the spirits which is obtained. Clothing is always a point of consideration for the maintenance of health. Considerable hardihood is acquired by the water-cure treatment; but not enough to justify careless exposure; and sufficient clothing should always be worn to give the feeling of comfort. Priessnitz much objects to flannel next the skin, but does not forbid it over the shirt, to those who are not strong.

Having brought to a conclusion the preliminary parts of

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\* Gräfenberg is said to be 1900 feet above the level of the sea, and 700 above the village of Freiwaldan, nearly two miles distant. The scenery is composed of hill and valley, neighbouring woods of noble pines; and, in the extreme distance, an extensive range of lofty mountains, the Sudates, the highest of which is said to be 5000 feet, presents a bold outline. The pure mountain streams, which are very abundant and clear as crystal, run into the Oder.

my subject, I shall, before the introduction of cases, consider the very important matter of *crisis*, which is always sought for with so much solicitude both by Priessnitz and the patient. He believes that it could not be produced in a healthy man; and that its occurrence is a sure proof that nature is successfully exerting herself to throw off the disease, by the exit of bad humor from the mass of blood. It is a sort of wholesale theory, and equally serves for all persons, and for every known disorder; and assuredly is the most convenient for one ignorant of medical science. I conceive that Priessnitz must have been gradually led to this idea of morbid blood by the observations which his experience enabled him to make; for, as before explained, he entered into the water-cure practice\* by accident, and not from tuition. His principles have arisen out of practice as an empiric art, and were not as a precursor first implanted in his mind. He has, in innumerable instances, so that the contrary forms the exception to the rule, witnessed the formation of crisis in the progress of the water-cure, amongst which boils take the lead in preeminence and importance of character. But the term also applies to any very marked disturbance of the system, or cutaneous change; as the crisis fever; odorous perspiration; odorous urine; vomitings; diarrhœa; hæmorrhoidal discharge of blood; and various kinds of eruptions on the skin. It was a fact of ordinary occurrence, presenting itself to the mind of Priessnitz, that the great crisis of boils, in proportion to their free supuration, proved in the highest degree remedial, removing chronic pains and internal sufferings of long standing; and that no marked amendment did take place until the event of

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\* I employ this term in its just signification, meaning experience, not charlatanism, from which I believe Priessnitz to be entirely free.



some crisis. Also the additional fact must be mentioned, that very frequently indeed the boil crisis would appear in the immediate vicinity of the disease, sometimes on the very spot. It is no longer surprising therefore that the idea of humor in the blood should be strongly confirmed in the mind of Priessnitz, and have grown with him into a rule of practice. The patient very naturally cares not for the absence of scientific explanations, but renders his faith to fact, and to the long list of very extraordinary cures which have been performed, after the failure of regular medical art. But it will not be uninteresting to examine more closely this doctrine of the bad blood, with reference to crisis and treatment.

In the case of morbid poisons, as, for example, small pox, measles, and scarlatina, nature evidently makes a vigorous effort to free the blood from the virus, by producing in the skin a characteristic eruption, attended by a symptomatic fever. After a certain period, health returns, and no reminiscence of the poison occurs. I adopt this illustration to shew that the blood can in this manner, by the medium of the skin, clear itself of the offending cause, however difficult the explanation may be. In the very familiar examples of cutaneous disease, as erysipelas, the shingles, nettle-rash, &c. we commonly refer to the blood as the source of disorder, although we can only generalize our notions; or, by other theory, we may regard these disorders as the offspring of some internal vitiated secretion, as acrid acid in the stomach\*, or bad bile, affecting the skin by supposed sympathy;—which is equally figurative language, if we are driven to close and searching analysis.

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\* A breaking out, as it is called, on the lips and chin, would probably be produced in any one, by eating for a continuance rich sauces, especially if made with bad butter.



Boils and carbuncles do not occur in healthy subjects ; and, when they happen naturally, are always looked upon as indicating a bad habit of body. The surgeon may choose other description, and call it weak and unhealthy inflammation, affecting the outward texture of the body differently from phlegmon or true inflammation. I will not therefore, for the sake of language, attempt to dispute the plain notion, so familiarly adopted, of the nature of crisis in the water-cure treatment ; but I do think it of great importance that it should have its sober limits, and not be made an ignus fatuus to the practitioner or the patient. The benefit arising from crisis must not be referred merely to the depuratory or cleansing process for the blood. Boils and rashes act as counter-irritants, in the ordinary and most accepted view, and in this way also prove useful ; on the same principle that we see advantage derived from blisters, and artificial eruptions produced by external applications, tartar emetic, croton oil, &c. ; and even the use of setons and issues is connected with this principle of counter-irritation equally with the idea of discharging the offending humor from the blood. It is very evidently the formation of an artificial disease, with the hope that it may be a substitute for the real one, and cause its removal.

It certainly happens in this way that much inconvenience must often be sustained by the patient in the progress of his cure ; and he must submit to be worse, before he can be better.

The occurrence of boils is not, however, invariably necessary to the cure. Nature determines this, and may give another kind of crisis ; and even none that is notable may be the pleasing fate of some, who still receive every benefit and recover.

From all that I have seen, and my opportunity has been

extensive, I am deeply impressed with the conviction that the employment of a very large amount of treatment, at one and the same time, in order to urge the circulation to produce crisis, demands most prudent consideration, and especially in irritable constitutions. I am free to admit that, in chronic cases of long standing, superficial measures would be of little or no avail, and that there must be efficient treatment. If too active measures be pursued in these exceptionable instances to which I allude, a sudden and too severe crisis might be produced, creating high suffering and possible danger. Instead of the favorably suppurating boils, such as are of untoward character might arise. I am sure that these unfavorable consequences may always be avoided by ordinary care, and do not belong to the water-cure treatment, as of right, more than any accidental untoward result belongs to the regular practice of physic.

Whenever a threatening appears of too strong a crisis, the treatment is to be immediately reduced; and, being nicely adapted also to the particular circumstances of the case, all anxious embarrassment will be removed.

In conclusion of this subject, I advert with regret to reflections which I have seen in print on the skill of Priessnitz, on account of a particular case which occurred at Grafenberg, unfavorable in respect to the constitution of the patient, and having a fatal termination. In its treatment at the latter period, there had been, on the part of the individual, much improper deviation from the directions laid down, owing to an impatient desire of urging crisis for the sake of a more speedy cure. From this cause, fever crisis set in suddenly and with destructive violence. Continued high irritation and fatal exhaustion ensued.

A lamented event of this kind, happily most rare, should serve as occasion for such reflections as I have already suggested. No remedy that is powerful for good, can be so weak an instrument as not to be also capable of evil. Neither the skill nor the prudence of Priessnitz should be lightly called in question by any one. I am convinced that, with regular superintendence of a case, he would never provoke a crisis beyond his power of convenient control. The very large number of patients on his list, varying from two to five hundred, could not allow of watch being kept over every case, and he must be sought for rather than seek. He is most attentive on every important occasion; and it must be the fault of the patient if he do not report progress; and more especially if he do not seek prompt aid in the event of the least unfavorable occurrence.

Another and very important consideration presents itself on the subject of crisis;—for how long a time is its occurrence to be viewed as an indication for the continuance of treatment? Evidently it requires judgment to know what may be referred to the influence of the constitution not yet delivered from its errors; and what to simple morbid action of the vessels of the skin, existing as a secondary and a local disease. I know an instance of the occasional formation of boils on the legs, causing much inconvenience, although the general health is quite restored; the full water-cure treatment, which was carried on nearly two years, having been laid aside for one; with the exception that the patient applies water dressings to the skin when it inflames, or to a boil; and uses a cold bath daily.

I have now to treat of the practical results of the water-cure treatment, in the narrative of some cases; selecting from



the large number which, through the kindness and courtesy of many friends, I have had the opportunity either of seeing or becoming acquainted with, those which I hope may prove of sufficient interest and instruction.

And that I may present to the reader a familiar picture of the nature of the different processes, I will give some account of my own treatment; adopting the maxim of Seneca,

“ Longum iter per præcepta, breve et efficax per exempla.”

I have for many years experienced inconvenience from rheumatic and nervous head-ache, with noises and deafness in the left ear; always dependant on medicine for the function of the bowels, yet very seldom requiring active treatment.

I waited a few days, to recover from the fatigue of travelling, before I began the treatment. At 6 A. M. Tuesday, April 18, I was visited by Priessnitz and the Badediener, who rubbed me down with the wet sheet for two or three minutes; following it with an equally diligent application of the dry one. The cold application being accompanied with such immediate friction, no severe shock was experienced. It was merely disagreeable, and that only in the first impression. The reaction was quickly established, and a safer mode of bathing cannot, I think, be imagined. The best results must follow from this effective cleansing process for the skin, tending to maintain it in health and to remove its diseased conditions. By the recommendation of Priessnitz, I put my flannel waistcoat over my linen.

The wet bandage was applied round my body, the dry part being closely rolled over it. The cold sensation was unpleasant at first, but quickly removed by exercise. I next used hand-rubbing for my head most freely with cold water in a basin, and was careful, by Priessnitz's desire, to chill the



nape of the neck. I next took a long walk, and drank three half-pints of water at suitable intervals.

At 11 A. M. sheet process repeated, and, in addition, a sitz-bath, with water at  $65^{\circ}$  Faht. to reach to the navel. I continually rubbed the abdomen and loins with the water, and remained a quarter of an hour. The unpleasant first impression does not last more than a minute, and it is not disagreeable to remain for any length of time, unless the water should be changed. At 5 P. M. this treatment was repeated. I came in from a walk, much heated by exercise in the sun, waited a few minutes till the pulse became quiet, and then had the wet sheet applied with a most refreshing and satisfactory effect.

19th. Placed in the wet sheet; the first lying down on it and investment with it were very disagreeable; but, immediately after the packing up with the blanket, &c. sufficiently comfortable; and, in a few minutes more, so much so that the effect was quite soothing and tending to sleep. At the end of three quarters of an hour, warmth came which would have produced perspiration, and, this not being desired, I was taken out, and immediately entered the shallow bath, at  $62^{\circ}$ , and was well rubbed with the water for about two minutes. The immersion being so slight, the impression of the cold water was very bearable, and the warmth of surface was afterwards quickly restored. Rubbing wet sheet at 11 A. M., and at 5 P. M. this and the sitz-bath at  $62^{\circ}$ . Each time rubbed the head.

20th. Same treatment. Examined my animal heat before being rubbed with the wet sheet; it was 97.5, and the sheet  $50^{\circ}$ ; no alteration produced—shewing the mildness of this refrigerant process.

After the lein-tuch this morning, went first into the shallow both at  $62^{\circ}$ , and then into the plunging bath, which was  $44^{\circ}$ ,

and cutting cold ; returned quickly to the shallow bath, which now seemed pleasantly tepid. I found the animal heat reduced one degree by the plunging bath, although the sensible reaction was excellent ; and, after the dry rubbing and dressing, I was comfortably warm.

23rd. Same treatment. In using the sitz-bath, found the temperature of the water raised by the warmth of the body 2 degrees in 5 minutes, 4 in 10, and 6 in 15. Hence the necessity of a change of the water, if a continued cold sitting be desired.

Being, in the common language, bilious from the change of diet, and such a free use of milk mornings and evenings, the bilious secretion suspended with loss of appetite, took blue pill and colocynth at night, and next morning the improved Cheltenham salts. It was my object to save time ; and I was confident that I should have this error more quickly corrected than by leaving it to the sole influence of the water-cure treatment.

25. I used the lying sheet and shallow tepid bath yesterday, but no other treatment. Every success and benefit from the medicine.

26th. To-day resumed the plunging bath, and went on with the same treatment to the end of the month, but changed the mid-day process for the use of the regular head-bath and foot-bath ; having recourse to the latter also, from being much subject to coldness of feet. I received the head-bath for a quarter of an hour, allotting five minutes to the back, and the same to each side of the head\*. I lay on the floor,

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\* I find a shallow wooden vessel, with a rounded groove to receive the neck, answer the purpose for this process very well.

and had a good proof of the superior conducting power of air over water for sound, in the strong perception of any contiguous accidental noises. From this application of cold water I always felt sensible invigoration of the nerves of the head.

The foot-bath was also sensibly useful, tending to comfortable warmth of the feet ; and the further rubbing of the ankles and muscles of the leg much relieved the consequences of fatigue.

May 1st.—In using the lein-tuch this morning, applied a long towel, wetted, from the arm-pit down the side, and found its effects agreeable ; the sensations, from the complete contact of wet linen, more pleasant on that side than the other. Indeed, the effect of this process is very soothing ; and it becomes a punishment to be unpacked. Every one would willingly go to sleep in the wet sheet. If, in any particular case, the feet fail to become warm with the rest of the body, socks may be worn.

May 5th.—To-day used the douche, the temperature of which was 44°, for two minutes : it immediately reduced the animal heat one degree ; but I had a comfortable reaction. I felt very sensibly how much the most active this is of all the processes, when the douche is strong and the water cold. I used it afterwards occasionally during my stay, but not regularly, as I did not require full treatment.

I proceeded regularly till the 16th, when I tried the experiment of lying on three wet sheets instead of one. The first impression on lying down was that of greater coldness ; but, when packed up, this subsided into a sense of pleasant coolness that was refreshing. This remained, so that at the end of an hour and a quarter I was not warmer than I had



been in ten minutes with the one sheet. It was particularly agreeable that the back remained cool so long. In an hour and a half, I had the same general warmth as with half an hour of the one sheet. In another quarter of an hour, I was becoming so warm that the animal heat had risen half a degree. Had I remained longer, I should, doubtless, have perspired freely. I was much satisfied with the experiment, as shewing the long-continued refrigerant power of the three sheets, in comparison with the one.

Two days after, I made the experiment of using the sweating blanket. On awaking at five, A. M. I had some head-ache: pulse rather full, at  $56^{\circ}$ ; animal heat  $98^{\circ}$ . In the course of ten minutes after being packed up, I was comfortably warm; least so in the feet, where I desired more weight. At the end of an hour and ten minutes, when the warmth of the whole body was much increased without sensible perspiration, the pulse was increased to  $66^{\circ}$ , full and soft; the animal heat  $99^{\circ}$ . At the end of two hours, the perspiration was universal, but not copious, p. 68, animal heat  $100^{\circ}$ . In another half hour, perspiration in a greater degree, but not streaming, p. 68, animal heat  $101^{\circ}$ . At the end of two hours and three quarters, I quitted the bed, for the full bath, into which I plunged instantly, while hot and perspiring, made two immersions, and came out exceedingly refreshed\*. On being dressed, the pulse was as in the beginning, and the animal heat  $97.5$ .

On the following day, returning from a long mountain walk, the sun shining, my pulse was excited and my animal heat  $101^{\circ}$ .

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\* It is to be considered that with the elevation of the animal heat, the nervous energy also is simultaneously increased, or more diffused.



I waited a few minutes only for a quiet circulation ; I wiped off the flowing perspiration, and then, while yet hot and perspiring, was freely rubbed down with the wet sheet, holding more water than usual. I was highly refreshed and agreeably cooled : my pulse became natural, and the animal heat, examined during dressing, was  $98^{\circ}$ . Hence another proof of the perfect safety of applying sudden cold to the heated body\* with perspiring surface, when the animal heat is raised beyond the natural standard.

I proceeded with regular treatment to the 20th, and then desisted. After this period, in consequence of a severe cold from remaining in wet clothes, when I had no opportunity of changing them, I was attacked with slight general fever, rheumatic pains, and severe throbbing head-ache. I immediately had recourse to a lein-tuch, followed by the shallow tepid bath, and two affusions with cold water. The relief was immediate : the animal heat, which had been increased to  $100^{\circ}$ , was immediately reduced to  $97.5$ . One repetition of this treatment was so successful, that in twenty-four hours I found myself quite well.

The final result of the whole proceedings has been a most satisfactory improvement of my health, in all the failings which I mentioned ; and I have not found the least occasion for medicine during the last two months. On my journey homewards, which was most extremely fatiguing, I took every opportunity in my power to use, on first rising, the rubbing wet sheet, hip bath, head and foot bath, and always with the greatest comfort and advantage : a plan which, together with

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\* In a paper on heat, which I had the honor of reading at the evening meeting of the College of Physicians, March 5th, 1838, I quoted the experiment of Sir Joseph Banks, Dr. Fordyce, and others, shewing the impunity of passing immediately from an apartment heated to  $260^{\circ}$  Faht. into a very cold atmosphere ; the effect indeed being agreeable, refreshing, and useful.

early rising, drinking cold water freely, and an active walk, I follow up with the highest advantage and sensible comfort and benefit.

In relating the following cases, I avoid all mention of names; knowing that the violation of this proper delicacy has given great offence at Gräfenberg, and disturbed the feelings of many persons.

#### CASE I.

A. B. æt. 44, for the last seven years during a residence in India, liable to severe head-aches; complaining frequently of heat on the top of the head, and a weight at the back. After a time, these head-aches became much worse periodically, accompanied with sickness approaching to faintness, and a momentary loss of recollection. These periodical returns at length becoming so frequent as every twenty-five days, and and the illness much more severe, accompanied with pain in the lower part of the spine, he was advised to try change of air from the sultry climate of India, to the Neilgherry hills, where, during a residence of two years, he became much better, the periodical returns being forty-five and forty-six days apart. As his general tone of health improved, the illness also became slighter. His health not being however established, he was directed to return to his native climate, and proceeded to Europe by the overland route, viâ Malta, where he changed his route, and proceeded to Gräfenberg, viâ Naples, Leghorn, Florence, Trieste, Vienna. During this journey, his complaint returned every twenty-sixth, thirtieth, or thirty-sixth day, and the illnesses were not so slight as they had been during the latter period of his residence on the Neilgherries. He complained a good deal of cold feet and frequent head-aches. The latter might perhaps be attributed to improper diet

at the hotels, and the fatigue and irregularity incident to travelling. It was the opinion of his medical friends in India, that there was no organic disease, and that his complaint was to be attributed to indigestion and the exposure to the climate of India. He had a return of illness on the 29th of March, in the carriage between Olmutz and Gräfenberg. Priessnitz saw him on the 30th, and commenced treatment on the 31st, with *abreibung* and head-bath, the back and sides being immersed for a quarter of an hour. On the 1st of April, he had *lein-tuch* at 5 A. M. followed by a tepid bath. *Lein-tuch* again at 12, followed by an *abreibung* and head-bath; at 5 P. M. an *abreibung*; this treatment continued until the 20th of April, when he had a return of illness in the night. Priessnitz being sent for, he directed his head to be wetted before using the *lein-tuch*, and an *abreibung* after it, instead of the tepid bath; the *abreibung* to be repeated at 9 A. M. 12 noon, 3 P. M. 6 P. M. and 9 o'clock P. M. in addition to which he was to have an *abreibung* every fifteen minutes for one hour after the faintness. This treatment of six *abreibungen* a day and *lein-tuch* at 4 in the morning, head-bath at 9 A. M. and 12 noon, continued several days; was then reduced to five *abreibungen* in a day, then to four; and, lastly, he went back to the former treatment, which continued until the first of May, when he had another return of illness. Priessnitz was then of opinion that the present treatment proved too severe for him, and must be modified; that the tepid baths were to be left off, but that he must continue the *lein-tuch* once in the day, head-bath once, four or five *abreibungen* in the course of the day, and a foot-bath twice in the day; and that as soon as the present illness had passed off, the head-bath was to be discontinued, and the head to be simply rubbed with water. He directed an *abreibung*



every fifteen minutes, to be repeated four times after any faintness; also one foot-bath after a paroxysm. On being told that the patient was fatigued with the exertion of dressing and undressing every fifteen minutes whilst ill, he directed that he should go into bed between each abreibung, be kept quiet, and that if he fell asleep, he was not to be disturbed.

During the first three weeks of the time that this gentleman was under treatment, he was *remarkably* well: had no head-ache whatever, and never complained of indigestion since the 20th of April (it is now 12th of May); he has occasionally complained of head-ache, but is nevertheless better than he was before he arrived; his general tone of health is improved; the pain in his back quite gone, so that he can run *down* a hill without uneasiness, whereas even walking *fast down* a hill formerly used to shake and jar his system. His feet are always warm; he no longer starts in his sleep as he used to do, and can sleep on his back as well as on his side, which he could never do before, since he resided in India; and he no longer complains of indigestion after dinner. Before adopting the treatment, he was always dependant on the aid of medicine for the bowels; since, he has not had the least occasion for any. It must also be mentioned, that, although the two last attacks of illness occurred within very short intervals of time, the head-aches were slight and the illness only a mild one. His chest appears to me to have become wider. I saw this gentleman almost daily, and left him in a fair way of recovery.

## CASE II.

A gentleman, æt. 25, had brought himself into a state of great nervous debility from excess of study. He was at



length incapable of any mental application, had great nervous depression, and was hypochondriacal. The sight so much weakened that he could neither read nor write, and even blindness was apprehended. Often had severe head-ache. Greatly lost both flesh and strength; the digestive functions torpid. He related to me that he first came to Gräfenberg three years ago, in the state of indisposition above described. His treatment then as follows: The plunging-bath in the morning on first quitting the bed. After breakfast, the douche from five to ten minutes even in the coldest weather. In the afternoon, a sitz-bath for half an hour: drank water in the usual quantity. For five months there was no change in the treatment. He observes, "I had no crisis, not even the water-rash; my health improved gradually. After this, I returned home, where I used a cold bath every morning, and avoided all sorts of spices and fermented liquors. My health improved more and more; my eyes grew stronger again, I could read and write; and, of my former complaint, there remained merely a pressure on the chest; inability for strong mental exertion, accompanied with some dislike for society. Three months ago I returned to Gräfenberg, when Priessnitz ordered me to be packed up in a wet sheet morning and afternoon, followed by the plunging bath; to douche for two minutes; to take two head-baths; and a sitz-bath for a quarter of an hour. He recommended me to make a practice of walking in the air with my head uncovered, however cold the weather." I saw much of this very interesting person, who quitted Gräfenberg during my stay. He was quite well. The digestive functions became regular very soon after the commencement of the treatment. This is an example of

no sensible crisis occurring, although the treatment was very active.

### CASE III.

A gentleman, æt. 25, tall and slight, had brought on debility by excess of study, attended with circumstances distressing his mind. For two years, suffered from great and almost continued pain in the head, chiefly in the back part; with pains of the teeth and down the cheek; constant noises in the ears. Was also generally weak, and in a very nervous state. Circulation irregular, with ice-cold feet. Bowels torpid. Had been at Gräfenberg six months. The treatment:—*lein-tuch* in the first of the morning for half an hour, followed by the *abreibung*. Both repeated in the afternoon. Used also daily head-bath, and foot-bath, the feet being well rubbed for half an hour. Was desired, in addition to the regular head-bath, to rub the head very freely with cold water, whenever it was painful. Drank water as usual. In the first week, the functions of the bowels became quite regular, and he was released from his former necessity of taking one or other kind of medicine. This benefit arising from the water-cure treatment is one of the highest magnitude, and happens, as far as my inquiry went, almost without exception. This gentleman assured me that he found himself well at the end of three months, and only remained at Gräfenberg longer in order to confirm the establishment of his strength. It was pleasing to hear him describe the altered state of his nerves for the better, the loss of all pains of the head and face; and the improvement of his circulation. He was no longer troubled with coldness of the feet.

## CASE IV.

A female servant, æt. 35, has suffered from difficulty of breathing during the last five or six years, in consequence of an acute attack of bronchitis, which she underwent in India; was unable to ascend a hill or to make any extraordinary continued exertion without much distress. Has also, during the last few years, whilst residing in India, suffered from severe affections of the bowels. One of these, the last, occurred in August 1842, and was very severe, and attended with symptoms of much inflammation, for which she was leeches and blistered. She recovered but slowly from this attack, and it was shortly followed by psoas abscess, which pointed below Poupart's ligament, and was opened. Towards the end of September, she was obliged to travel with her master and mistress on the way to Bombay, but was conveyed in a palanquin. During her stay in Bombay, in November, whilst still very weak, she was exposed, in a tent, to wet feet during an entire day, in the discharge of her duties, and caught cold, which brought on, as she states, inflammation of the bowels; and being also at this time much occupied in the care of children, one an infant, and in the packing and lifting of trunks, her hernia (femoral) occurred at this time, on the same side on which the abscess had been shortly before. She continued in delicate health till her arrival in Malta, where she sought medical advice for the first time since the occurrence of the hernia in the end of February. She left her service early in March, being unable to carry the children, and went to Gräfenberg to place herself under the treatment of Priessnitz. She was very asthmatic at this time.

He commenced her treatment the first week in April, ordering her a lein-tuch every morning, to be succeeded by an



abreibung, and this followed by a sitz-bath; the abreibung and sitz-bath to be repeated at 12 o'clock, and the lein-tuch, abreibung and sitz-bath, at 4 o'clock P. M. every day; to wear a wet bandage, night and day, round her loins, and to wear a truss upon the situation of the hernia, which was not to be removed night or day.

After having been a month under the fore-mentioned treatment, she complained of very severe pain in the region of the bowels; upon being informed of which, Mr. Priessnitz directed that she should have an abreibung every ten minutes until she should obtain relief, and to walk up and down the room wrapped in a dry blanket between each. Every abreibung relieved her; and when she had taken six, she became quite comfortable.

In the course of the treatment, the catamenia occurring, apprehension was entertained at the probable injury from continuing the treatment; in consequence of which, the advice of Priessnitz was sought, and he directed that there should not be allowed any interruption. The effect was, complete relief from the distressing pains habitually attending the performance of this function, the quantity of the discharge was much increased, but did not continue longer than the usual time, and no weakness was experienced. Upon the return of the periodical function, the same relief from pain was experienced, the quantity was not excessive, the interval was nearer to the natural period than usual, and the discharge did not continue. She now enjoys good general health and strength (May 24th), and no longer suffers from asthma. Her hernia also she considers decidedly better; the truss is still worn; but she has not noticed, as formerly, any tendency to the descent of the bowel.

## CASE V.

A gentleman, æt. 45, of full habit, thus describes his case. “ I was troubled and annoyed, four days or more, with pain of the left side opposite the heart. I met Priessnitz, and informed him of it. He called the next morning at 9 o'clock; the pain still continuing, he ordered me, at 11, to take an *abreibung* for five minutes, that is to say, I was to be rubbed, and rub myself that time in a wet sheet, standing upright. I was then to wait ten minutes, walking about the room; then take another *abreibung* for five minutes; then to walk half an hour and take a *sitz-bath* for twenty minutes. All this I did. At half-past 3, I was ordered to do precisely the same things over again. However, after the morning operations, I found that I had taken a severe cold, or that the operations had made me ill. I had pains all over me, my limbs, my back, and my head, were in pain, and I became very hot and feverish. The pains and feverish symptoms increased; at four o'clock, I took an *abreibung* five minutes, then walked about half an hour; then I had a *lein-tuch* for one hour, then a tepid bath five minutes, at 68°. All the pains soon left me. I walked out for half an hour, had supper, and went to bed. At five in the morning, my attendant came; and, as I had been feverish in the night, was so then, and had some pain in the head after the *lein-tuch*, which I took for an hour, I used a tepid bath at 64° for four minutes, receiving also one cold affusion over the head. Without further treatment, I found myself next day quite recovered.

## CASE VI.

A gentleman, æt. 40, arrived at Gräfenberg, in a weak state, with bad digestion and constant pain in the right side. He went at once from his lein-tuch into the cold bath. He abstained from the douche when the weather was severely cold, and never took it more than two minutes. He was several months before he got a crisis; but was cured of his indigestion before that time. When the crisis came, it was on the opposite side, a large boil, very painful, accompanied by much irritative fever for near a week; but it has *cured* the pain in his side, for which he could get no remedy before.

## CASE VII.

The wife of this gentleman was an invalid in many respects—had pains in the loins and in one leg; had for years been a great sufferer from general nervous weakness. She is now quite well.

Until the crisis, which appeared in the form of several large boils on one leg, her treatment was—lein-tuch one hour, then cold bath; at eleven, abreibung and sitz-bath; at half-past four, lein-tuch one hour; then, either the cold bath or abreibung, whichever she pleased.

When the boils were painful and discharging, she had tepid bath after lein-tuch, instead of cold bath. From being very debilitated, she has become strong enough for any exertion. This lady has returned to Gräfenberg, out of gratitude to the place where she and her husband received the blessing of health. I saw him on the day of my departure. They will now use only slight treatment, to confirm the general strength.



## CASE VIII.

(By the Patient, aged between 40 and 50.)

“ I arrived at Gräfenberg 15th July, 1842 ; my complaint, as described by my physician, being ‘ bad digestion and sore throat.’

“ I have *always* been subject to irritation of the throat, more or less, from a boy : within the last eight years, it has troubled me more, and given either real or fancied cause of uneasiness.

“ For years, previous to 1835, I was subject to *boils*, which gave me much pain and annoyance. Up to this period, my throat gave me little or no trouble ; was generally, though relaxed, free from phlegm. The end of 1835, I began an aperient pill ; I took one, generally, daily till 1842, up to the time of my coming here. Soon after I began to take this pill, *the boils ceased*, and my throat gradually grew worse : though I felt more comfortable in my digestion, my throat got worse—more and more troublesome.

“ For nearly 20 years I had constantly taken wine and spirits *freely*. When I came here I was much more corpulent than I am now ; and my whole system seemed deranged. I was nervous, and like a *barometer*. I could not venture, after exercise, into a church, or into any large cold building, for fear of taking cold, which I almost invariably did, and this always affected my *throat* ; sometimes laid me up for a week in my bed-room. I attribute this sensitiveness to having taken, seven years ago, a quantity of mercury, which has come out here, making my mouth sore, and affecting my breath strongly occasionally. This, I believe, has now ceased. I am less sen-

sible now to changes of temperature. For years I have been unable to take walking exercise in a week, equal to that which I can now take in a day. Previously to coming here I always *rode* everywhere. I had pains in the stomach and in the feet, with redness in the hands and knuckles, and in the legs: in all these there is now no pain, having had crises in them. The arms are still painful, but I have had no boils or crises in *them* yet. My digestion is better, my throat is better, and progressively improving. I have no pain.

“ *Treatment*, commenced July 16, 1842: The first 5 weeks, lein-tuch, at 5 in the morning, one hour; then, abgeschreckte (tepid) bath, 13° Reaumur, 3 minutes; an umschlag round the body; then walk an hour; then breakfast; at 11, abreibung; then wait a quarter of an hour, then sitz-bath a quarter of an hour; then walk, then dine. The same at 4 P. M.; got better daily.

“ For six weeks, all the operations, as above, were continued; and the douche at 9 A. M. for 2 minutes, which was gradually increased to 7 minutes, I took regularly for six months, and during the winter.

“ The 9th week, in addition to the sitz-bath, I took the cold bath every morning; then—lein-tuch one hour, tepid bath one minute, cold bath 2 plunges, then tepid again one minute. I have lately omitted the douche and cold bath, in consequence of having crises. When I was first enveloped in the wet sheet, a strong sour smell, like mellow apples, proceeded from me, and filled the room; and was of so subtle a quality as to be with difficulty washed out of the blankets. I had never experienced this odor before. Priessnitz told me that it must all come out, for I could never get

better till it was entirely removed. This smell has not been perceptible the last three days.

“ I have daily, by order, taken 10 or 12 glasses of water, 5 before breakfast, the rest distributed at intervals. Before breakfast, much mucus has been rejected from the stomach, very sour and bitter, sometimes of a green colour, sometimes yellow. I have still eructations of water before breakfast, but not sour ; and now and then a little froth and phlegm. Upon the whole, I am quite satisfied, and consider my coming here providential ; for, in England, I could find no certain remedy for one thing that did not cause inconvenience and disorder of some other kind.

“ When I shewed Priessnitz my throat, he said, ‘ This is caused by your stomach, which must be set right before your throat will be better ; besides, your nervous system is all wrong ; but I have hopes I can make a different man of you ; you must get thinner, and then your digestion and throat will both get better.’ ”

He had pursued active treatment for ten months ; a duration that may appear surprising. The throat has been his greatest trouble. The mucous membrane had long been diseased ; and at one time the uvula had become so elongated, that a portion of it was excised. He might probably have desisted from such a regular proceeding as he was still pursuing, some time past ; but his determination was to stay at Gräfenberg, under treatment, as long as a vestige of complaint remained ; so truly did he enjoy and estimate the great improvement which he had received. The odor of which he speaks was connected, I have no doubt, with the gouty diathesis. He had experienced occasional gout. He told me



that, on his first arrival, he had scarcely the feeling of energy to cross the road. I saw abundant proof of his acquired activity; and he looked strong and well.

#### CASE IX.

A fine, lively boy, aged three years, in general well, yet subject to inflammation of the stomach and bowels\*.

He had an attack of inflammation of the stomach, accompanied by sickness, with strong fever and determination to the head.—In the evening, the child was placed in a bath at 70° Fahrenheit, in which he remained 20 minutes; cold water was added as the temperature rose. During this time, cold water was poured from a tumbler on his head, repeated at intervals of a minute; and, as usual, his whole body was carefully rubbed. He was then taken out and placed on the sofa, and covered with a sheet and blanket, with the back of his head in cold water for 10 minutes. By this time, reaction had taken place, when wet compresses were applied to the head and back of the neck; and the body, from under the arms to the hips, was wrapped in a similar way. He slept quietly till three in the morning, when the previous symptoms having partially returned, the first treatment was repeated; after which the child was again placed in bed, where he slept till morning, and was then quite well, and went out as usual.

One month after this attack, he was taken ill in a similar way, but with symptoms much more severe: the fever running high, accompanied with delirium. The treatment was commenced by placing him successively in nine wet sheets, from

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\* In those dangerous attacks of enteritis, attended with obstruction of the bowels and excruciating pain, under which the stomach absolutely resists the introduction of all medicine, I should in future have recourse to certain water-cure processes and treatment, in preference to the ordinary method of practice.

which the water was but slightly wrung out. In each of these he remained about 5 minutes ; towards the last, the heat being diminished, he was allowed to remain 10 minutes. The feet were cold ; and, as long as they remained so, the wet sheet was only applied down to the knees ; meantime, the feet and legs were rubbed strongly with the hands.

While the extreme heat continued, the wet sheet was covered by a thick, dry one, instead of a blanket as is usual. After the application of the last wet sheet, he was placed in a bath of 70°, where he remained nearly an hour ; the same process of rubbing and pouring water over the head being practised. The first day, the same process was repeated four times ; the duration of the bath being not so long when the fever was not so high. During the night, the wet sheet was changed almost every hour. On the morning of the second day, the child refused to go into the bath, calling out himself, at intervals, for additional wet sheets. Orders were given that his inclination should be complied with. In the course of the morning, the child himself desired that he might be put into the bath, where he remained till the heat under the arms and on the back of the neck was the same as the rest of the body ; this equality of temperature being the general guide for the duration of a bath. It is worthy of remark, that the more the fever was reduced, the more quiet the little patient became, till at last he remained in the bath perfectly tranquil. The same treatment, slightly varied, was continued four days, when the child was well, and was sent out to play with the other children. In eight days after this, a pustule appeared on the foot, containing matter, which discharged freely.

*Observation.*—This case might probably have passed into

continued infantile fever, had it not been in this manner promptly and successfully treated. When fever runs very high, as shewn by the burning skin, delirium, and other symptoms, it is a good modification of the use of the leintuch to cover it with a dry sheet, instead of the blanket and packing up in the usual manner.

### CASE X.

A gentleman, aged 45, tall and stout, received two injuries of the head by a fall, one of which was in hunting, about seven years ago. The nervous system was much deranged, especially since the second accident, five years ago, when the spine received a strong contusion and shock. For a long time he had been very nervous, and unable to compose himself during any sedentary occupation; having also heavy and stupid feelings of the head; *muscæ volitantes*; constant singing in the ears; prickings and numbness of the limbs, with frequent cramps; unrefreshing nights, often sleepless, and in the morning more tired than when he went to bed. He neglected himself after the first accident; but after the second, having the use of the limbs so much impaired that it was with great difficulty he could walk half-a-mile, he went to Bareges: first used the baths at St. Sauveur, for 2 weeks; lay in them for an hour and a half to 2 hours: then, at Bareges, douched every day for 10 minutes; after which, was put into bed, where he had most copious sweating; and then, covered with a blanket, was carried to his lodging. At the end of four months, his amendment was very satisfactory; and he quitted early in August. Relapsed at the end of the year, and passed a bad winter. Next year, he used hot sulphurous baths in Switzerland, with advantage, but remained a great invalid.



He had several symptoms indicating a disposition to gout. He did not use any further treatment till coming to Gräfenberg, nine months ago. He has had all the processes, and been on full treatment, without having received any decided benefit to his nerves. Yet his muscles have become stronger, and his digestion is improved. He found it necessary to douche very cautiously; for, if he received it with great force and much continuance, he found his head exceedingly disordered by it. It was his intention to give up the treatment and quit Gräfenberg if he did not improve in two months more.

It seems probable that more than functional error in the membranes of the brain and spinal marrow exists in this case, so persistent have all the distressing symptoms been. I do not expect that he will be benefited by the water-cure treatment, and think that he might receive advantage from undergoing a regular course of alterative and purgative medicine, to be followed by the use of the baths and douche at Buxton. It is probable that he may have recourse to such measures, should he be finally disappointed at Gräfenberg.

#### CASE XI.

A lady, aged 27, had typhus fever, from which she dates her loss of health. Subsequently, she had a fall from a horse, causing concussion of the brain; and, on another occasion, a severe contusion of the head, with a wound by the falling of a beam. For a long while, she experienced intense sufferings, from which she never recovered; and she came to Gräfenberg with the following symptoms: frequent severe pains of the head, with a strong sensation of burning heat of the scalp; hearing and sight affected; altogether in a highly nervous state, and seldom sleeping more than an hour in the night;

all the functions irregular ; the feet almost constantly affected with icy coldness ; with frequent pains and oppression in the hypogastric region. She had always received more benefit from cold water applications than any other means, and especially from using the *mer de glace* (a stream derived from the melting of ice and snow from the mountains), in Switzerland, as a bath. Very active medical treatment had been used at different periods ; leeches and blisters to the spine again and again ; and courses of medicine of various kinds.

On her arrival she was put on the following treatment. In the morning early, lein-tuch, tepid bath (Reaumur 14°), and plunging bath in immediate succession. Abreibung and sitz-bath in the middle of the day ; a regular head-bath once in the day ; and whenever painful and heated, to apply cold water freely by the hand, and leave wet compress on any heated part. The foot-bath once or twice a-day ; rubbing the legs also with the water, for they were affected with weakness and swelling. An eruption of irritable pimples appeared, which was treated with wet bandage covered by dry. Priessnitz was glad to see this early crisis. The body bandage was used. She drank a medium quantity of water, and was much in the air ; but she could not take great exercise. At a particular period, the nervous system was greatly disturbed ; and there was some hysteria, with much affection of the head. In these circumstances, Priessnitz directed 4 abreibungen in the morning and 4 in the afternoon, with intervals of half an hour, during which she went into bed, to gain composure and warmth. She did not complain of this troublesome treatment, and acknowledged the very sensible relief which it afforded her. On my quitting, I compared her state with what it was on her arrival, with great satisfaction. Her

health was in every respect materially improved ; and the head so relieved that she could sleep comfortably. There was every promise of the case proceeding to a favorable issue.

## CASE XII.

A clergyman and schoolmaster, aged 35, had too intensely exercised his mind and feelings, and brought on so distressing a state of nervousness, that, in preaching, he became painfully confused in a quarter of an hour. He had severe indigestion with opposite states of the bowels, but most commonly inert ; head-ache with confusion, noises of the ears, and dimness of sight ; as in the last case, heat of the scalp and extreme coldness of the feet ; depression of spirits, with distress that he was incapable of any mental exertion, being an ardent student. He was much affected by every change of weather. His treatment consisted of lein-tuch and tepid bath, with plunging bath, sitz-bath, head-bath 3 times a day, foot-bath twice a day, the soles of the feet being diligently rubbed ; the body bandage. He drank water freely ; and he had abriebung whenever the head was more than usually uncomfortable. After about a fortnight, the use of the douche was added to the treatment.

He described, in glowing terms, the happy improvement which he received after 10 days' treatment, and especially in his digestion and the state of his head ; but when he had employed the douche for a week, he was apprehensive that it did not suit his nerves, for his head became painful and confused after using it.

In all these cases of great morbid sensibility of the nerves



of the head, it appears to me that the application of the volume douche, if ever used, should be much delayed ; and that the jet shower bath, applied with only moderate force, continued from one to three minutes, is a more appropriate remedy.

It is very obvious that, in the management of all delicate and difficult cases, a good medical judgment is required to adapt the treatment to the many changing circumstances which must occur.

### CASE XIII.

A gentleman, æt. 44, of slight frame and delicate appearance, had received great trials to his constitution; from living in various climates under circumstances of immense exertion of mind and body ; so that he incurred a severe liver disease, followed by both gout and rheumatism. His father had been a sufferer from gout and from *tic-douloureux*. He, therefore, had the hereditary predisposition. By treatment, his health was improved up to November, 1839, when, from exposure to wet in shooting, he experienced painful rheumatism or gout, for each name was given, in one knee-joint. It was so swollen and misshapen, that some thought it was dislocated. The frequent use of leeches ; of iodine, externally and internally ; of calomel ; sarsaparilla and other medicines, formed the chief treatment. The disease increased severely. He describes that “ the leg wasted away ; that the hip had the appearance of being dislocated ; and that some inflammation became visible at the lower part of the spine, with frequent aching pain. The knee was so bent, from contraction, that the limb was drawn up almost to doubling, and

quite useless ; in addition to which, he was reduced to a skeleton, having lost all appetite and sleep." The actual cautery to the spine was proposed ; but not having profited by any of the various means employed, he fell into despair, and was urged to try the water-cure at home. He here says, " I was so weak that I could only allow gentle measures. My diet was strictly regulated. I drank plenty of pure water ; morning and evening had an *abreibung* and shallow tepid bath (66° Faht.) ; in the middle of the day, free ablutions of the whole limb, and wet bandage covered by dry. From the commencement I began to feel differently. Sleep and appetite soon returned ; and, my strength gradually improving, I was able to bear the use of the sweating blanket, followed by the half-bath. Ere long, numerous boils appeared on the legs, which afforded great relief to the deep-seated pains." Had *sitz-baths*. In one month he was so much improved that he could use crutches for half an hour ; and at the end of three months he had gained sufficient strength to undertake the journey to Gräfenberg. But still having a very large number of boils in a state of suppuration, his nerves were greatly disturbed, and he was rendered very ill by travelling 500 miles ; was much affected with cramps and hysteria. He arrived. Preissnitz told him he would recover, but a long time would be required. At first, his treatment was moderate, and afterwards increased, with a cautious use of the *douche*. He drank water very freely. For a time, its early morning use was slightly emetic ; but this relieved him of bile and phlegm. In October, 1840, he could walk a little with two sticks. The boils increased over the body. In November, the weather being unfavourable, he took cold severely from accidental exposure, and new symptoms arose.

An abscess gradually formed between the bladder and the rectum, and at length broke, the matter being discharged partly by the rectum, partly by the urethra. His cramps and pains of the bladder and bowels were so severe, that his life was in imminent danger. For a fortnight he was without sleep, could not take any food, and for ten days had water only to support him, if support it could be called. Cold-water lavements, half and quarter baths, fomentations, and wet linen rubbings, all more tepid than usual (80°), were freely employed. When the abscess found free vent, the symptoms so much abated, that a little sleep and the capability of taking some nourishment returned. He gradually improved, so that by the middle of January 1841, he could again walk with two sticks about the house. Now more active treatment was resumed; and even the sweating in the blanket twice a week, and the cautious use of the douche. The progress of cure became very favorable. Before the end of summer he was able to take exercise and enjoy the mountain air; and appetite and sleep returned favorably.

In April 1842, he was sufficiently recovered to leave Gräfenberg, with the use of the limb quite restored, all contraction being removed, and the general flesh, strength, and spirits quite regained. He was the wonder of Gräfenberg! I saw this gentleman about 10 weeks ago. He was in good health and spirits; but felt the necessity of avoiding great fatigue; as in such case he was reminded, by achings, that his limb, although so happily restored, could not possess the vigor of one that had never been diseased. In a review of all the circumstances of this important case, infinite praise was due to Priessnitz for its management. He had been indefatigable in his attentions.



## CASE XIV.

A gentleman, aged 27, tall and stout, very muscular, came to Gräfenberg, nine months ago, having a cutaneous eruption of a syphilitic character, a hernia humoralis, enlarged tonsils, sciatica, and great disposition to general rheumatism, with a bilious countenance, much indigestion, and great nervousness and depression of spirits. Priessnitz at once told him that his case would require a long period for the cure. The treatment was at first mild; but, without unnecessary delay, was made active; when he sweated in the blanket each other day; and, after four months' douching every day, had two sitz-baths every day, lasting an hour, the water being changed twice or thrice; with also abriebung, lein-tuch, head-baths, and foot-baths; for this patient was very liable to pain and congestion of the head, with great coldness of the feet. He was exceeded by none in his zeal in drinking water. His usual quantity was 16 pints daily; and one day he was ambitious to take four pints more; from which he had all the feeling of having drunk too much wine, attended with a vertigo; and being alarmed by these symptoms, he returned to and continued his former quantity without inconvenience. He had passed the last winter at Gräfenberg, and was in the habit of taking his first morning walk before the rising of the sun, and in an atmosphere of from 6° to 10° Faht.; much enjoying the sight of the glorious orb first appearing in the horizon. After breakfast, he used with great satisfaction the icy douche! for 8 minutes; but when I found him at Gräfenberg, the duration was 10, and twice a-day. He had been there nine months. He was the picture of health; and described himself as being strong and free from all inconve-

nience. His muscles were large and firm, and many remarked that his chest had considerably expanded. In the general history which he gave me, he stated that in the first instance he had been freely treated by mercury and iodine, sometimes with the effect of removing the immediate symptoms; but they recurred; and at length, feeling much incommoded by the medicines, and having some addition of complaint, after an interval, he had recourse to the water-cure treatment. Under it, he had repeated severe crises of boils, from which he was persuaded that he had received most material benefit. In this case, the copious draughts of water certainly appeared highly useful, and particularly to the bladder, the mucous membrane of which had been so much affected, that in the beginning the urine was passed with great difficulty, and highly charged with mucus: but it must be observed that, when using these great libations, he took immense exercise, often walking 6 or 8 miles before breakfast.

#### CASE XV.

A gentleman, æt. 40, tall and slight, appearing free from complaint, gave me the following account. When a boy at school in Germany, he was compelled, with the rest of the boys, to take a purgative every Saturday morning; and thinks that from this unfortunate and absurd practice he acquired the subsequent necessity, and that an increased one, of resorting to medicine. He was subject to great depression of spirits, inaptitude to exertion, rheumatic pains, shortness of breath on ascending a hill, and occasional spitting of blood of a scarlet hue. He had tried various medicines, and long persisted with a slight mercurial alterative; but, he says,

without improvement. He was dependant on lavements for any action of the bowels. He went to an establishment near his home, where he was sweated in the blanket every day, had the plunging-bath, and other means ; but he did not feel equal to the perseverance in such treatment, and went to Gräfenberg, where he had been nine months when I first saw him, remaining, however, more from choice than necessity. His treatment had been *lein-tuch* in the first of the morning, avoiding the perspiring, followed by the tepid and plunging baths in succession ; an occasional *abreibung* ; two *sitz-baths* every day, at first tepid, afterwards cold ; body bandage\*. He drank from 10 to 12 glasses of water. After two months, he used a *douche* daily. His recovery was perfect, and he was an excellent specimen of the good effects of the water-cure. In a few weeks after using it, his digestion became quite regular.

#### CASE XVI.

An Austrian officer, æt. 47, tall and robust, had acquired gout in the ankle and side of the foot at 37, and since in various parts, never escaping a winter till the last, and having fits of from 6 to 9 weeks' duration. He had been at Gräfenberg 11 months. On his first arrival, the limbs were very infirm, the ankles swollen, and the feet and knees severely affected with chronic pains, giving him a dread of attempting walking exercise. He had previously been treated with va-

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\* In future this is to be understood, if not mentioned ; the exception to its use being very rare.



rious medicines, and with calomel very freely. He began with the use of from 2 to 4 abreibungen daily; then 2 leintuchs, followed by the shallow bath; afterwards by the plunging bath; next, the sweating in the blanket each other day, until crisis formed extensively on the legs, when it was discontinued; and he had also a strong vesicular rash on the body, with a line of demarcation exact with the bandage.

He experienced immediate and very complete relief to the pains of the knees and ankles when the boils appeared. Afterwards, they formed also on the knees, arms, and shoulders. When the crisis subsided, he douched twice a day for 8 minutes, instead of using the plunging-bath, as he thought it suited him better, and proved more favorable in producing good crisis; for the chronic pains had returned occasionally, but were invariably relieved by the formation of boils. When I saw him he was almost perfectly restored to health. He related that he had derived great strength to his ankles from the daily use of a cold foot-bath, deeper than usual; that when he did use the blankets, he found the afternoon more favorable than the morning for the producing of perspiration; and this, he thought, especially as he had a quick digestion. For those who might have a weak and slow digestion, he considered it, from observations he had made, an unfavorable time. This gentleman was so well recovered that he was about to leave Gräfenberg.

#### CASE XVII.

A gentleman, æt. 47, robust and plethoric, subject to regular gout, hereditary, for 10 years, the fits severe and very pro-

tracted; once had a rheumatic fever, and now often suffers from rheumatism, especially in the shoulders and the arms. He related that he had been regularly treated in his fits with mercurial purgatives and colchicum, with a sure control over the symptoms, but without lasting benefit; that the last fit, of two months duration, had been left more to itself; and one knee had remained so much swollen, stiff, and painful, that loco-motion was extremely difficult. The usual liniments and lotions being ineffectual, although in combination with the internal use of iodide of potassium, he had recourse to a part of the water-cure treatment, using wet bandage, covered by dry, constantly to the knee; and every morning, on first rising, a cold bath. This bold practice was so successful, that he soon recovered the power of walking. He had tried every kind of regimen as a preventive—meat without vegetables, and then a farinaceous diet without meat; total abstinence from wine and beer; and yet his prudence was not rewarded by success. Since he had drunk water freely, he had not found any necessity, as far as his feelings dictated, of being at all mindful in his diet, so perfect was his digestion, doubtless rendered better by the acquired power, from the improvement in the limbs, of taking free exercise. There were chalkstone deposits in the fingers and elbows.

His treatment was as follows:—In the morning, early, sweating in the blanket, followed by plunging bath; a walk and free drinking of water; at 11 A. M. a douche for five minutes, having begun with three; on his return from the long walk to and from the douche, an *abreibung*, which much refreshed him; at 5 P. M. 2 *abreibungen*, within half an hour of each other; *umschlags* to all the affected parts. I left him making very favourable progress towards his cure. I should

observe, that this patient was not desired to make use of the body bandage, as he had so regular and perfect a state of digestion.

### CASE XVIII.

A gentleman, æt. 50, of middling bulk and stature, had hereditary gout first 20 years ago, brought on by violent efforts in swimming, to save himself from drowning, on a winter's day; was for years subject to fits of great severity, and of 6 or 8 weeks' duration; has chalkstones in various parts, particularly in the hands and feet; disappointed by allopathic medicine, of which colchicum and mercury formed part, he tried homœopathic, with no other result than the longer staying away of the gout; and this benefit he attributed to the care in diet. The fits were of equal severity when they did return. For some time he adhered to a diet of fish and vegetables, and for several years has wholly abstained from wine. Five years ago, went to Toplitz and Carlsbad, without benefit, and afterwards to Wiesbaden, going through a full course of treatment there, still without apparent advantage. He next proceeded to Franzens-bad, in Bohemia, and tried the mud baths for a month, sitting in the mud, up to his neck, at 97° Farenheit, for half an hour, each other day, with no other good result than curing his lumbago, which has never returned. He came to Gräfenberg three years and nine months ago, in a state of such lameness and continued suffering, that he felt himself fast approaching to a bed-ridden state. For the space of two years, with the interruption only of two months, he made daily use of the sweating blanket, with this frequency more by his own desire than the wish of



Priessnitz, wishing to force crisis ; but he is convinced that it was an error, and that he was weakened. In six weeks, he had boils on the insteps, which remarkably relieved the chronic pains ; and, some time after, the urine deposited much substance, which appeared to him like wet chalk. In the beginning of the treatment, Priessnitz examined him, first at the half-bath, then after the plunging, and told him his complaint would be cured in time, and even encouraged him to expect the recovery of the hands ; but I am persuaded there was too much disorganization of parts to admit of it. In some of the joints of the fingers there was ankylosis, and here and there absorption of cartilage. However, much of the chalkstone deposit had been removed by the treatment, and I doubt not he will obtain further improvement. After five months, he had an acute attack, which at first he left to itself, but afterwards used rubbings in the shallow tepid bath, with tepid affusions and umschlags ; all with much advantage. He remained the whole winter, but considers that the “winter cure” did not suit him, the cold being often severe, from 4° to 10° Faht. for a continuance ; but he says that the atmosphere was so clear and still, with often a full sun, that the cold was agreeable to those who could take very active exercise. When restored from the fit, he resumed treatment. His skin was with difficulty excited to perspiration ; and Priessnitz had desired him to use two douches a-day, and even advised three occasionally ; but he continued with two, sometimes using a plunging bath also, and always, twice a week, after the sweating in the blanket. He quitted Gräfenberg for a time, and returned. He has used umschlags always, and drunk 10 or 12 half-pints of water daily. He related to me that the gout now very rarely and very slightly affects him, and that he can

walk ten miles with more ease than one formerly. He looked well. He had not touched medicine since he had been under the water-cure treatment, which he extols in the highest terms.

### CASE XIX.

A gentleman, æt. 49, robust and rather corpulent, after syphilis five years ago, had a fever in Italy, for which he was bled so freely that his strength was exceedingly reduced. He kept his bed three months; was bled from the arm 15 times, and had leeches, also, very freely applied to different parts. On recovering sufficient strength, he went to Gräfenberg, then having universal pains of a doubtful character, with much cutaneous eruption; sweated in the blanket every morning for four months; and, instead of being weakened, gained strength regularly; always the plunging bath after it. At that time the lein-tuch was seldom used, except in fevers. He douched also occasionally, and drank from 12 to 15 glasses of water daily. He recovered perfectly, and remained well three years. By many acts of imprudence he lost his health again; had an inflammatory attack on the chest, for which he was freely bled, and with relief at the moment; but other evils followed—lumbago and sciatica, of the most painful description. Leeches and blisters were applied to the hip repeatedly, without relief. He consulted the most eminent physicians in Germany; and, by their advice, used leeches, blisters, and mercurial frictions; in opposition to which the sciatica increased. He went to a water establishment in his neighbourhood, his convenience not permitting him to travel to Gräfenberg. He used, first, a plunging bath, then the

vapor bath for one hour, and next the plunging bath again ; but this treatment much disagreed, causing particularly oppression of the chest. The sciatic pain still increased, and at length became so intolerable, that the actual cautery was extensively applied to the hip, of which I saw the evidence. He took mercurial purgatives frequently.

By these means the violence of the disorder was broken ; but he got cold, and had inflammation of the larynx. After much interval, it was with great difficulty he could accomplish the journey to Gräfenberg, where his anxious thoughts were directed. At length, he again presented himself to Priessnitz ; then having severe sciatica ; pain also of the femoral nerve ; indigestion ; hæmorrhoidal suffering ; hypochondriasm, and general debility. At first, the treatment consisted of lein-tuch, shallow tepid baths, sitz-baths ; and wet bandages, covered by dry, to the affected parts. Afterwards, he sweated in the blanket, and used the plunging bath, not finding any disagreement, as he had done with the vapor bath, &c. After three or four months, had general crises, but no boils in the affected limb till eight months had elapsed, when also the thigh was covered with a scaly rash. The pains were entirely relieved when the last boils had suppurated freely. He next used the douche very regularly ; and, when I saw him, did so for eight minutes every day. The limb had recovered its size and power : he could walk almost any distance without inconvenience. He remarked that, till within the last few weeks, the bad limb had never perspired when the other parts of the body freely yielded to the influence of the blanket process.

This was a very important case, and one that did infinite credit to Priessnitz and the water-cure means. It shews also



the necessity of their being used with judgment; for, till he came to Gräfenberg, he had been injured rather than assisted.

#### CASE XX.

A military man, æt. 32, had used mercury for a long time, which created great nervousness eventually; and, in a state of much debility, with wandering pains, he went to Gräfenberg. He began with two lein-tuchs, a shallow tepid bath, and sitz-bath. Soon after, a plunging bath was added every other day. But his zeal led him into error; he would go far beyond his instructions in every thing. One morning, he drank eight large glasses of water, instead of the four prescribed, before breakfast; and, omitting the necessary walking exercise, went into the billiard-room. The kidneys had not actively secreted. His feet became cold, and he was altogether uneasy. He went out for a walk, accompanied by a friend. He soon fell into incoherent conversation, and was got home with some difficulty. He did not quite lose consciousness, but was speechless; made signs for pen and ink, but could not write. He had violent head-ache. Priessnitz directed a tepid (62°) foot-bath, with free rubbing; sprinkled water on the face and head; and shortly after were applied three abreibungs in the course of half an hour; and wet bandages to the head: he was put to bed. Intense pain of the head ensued, with some general fever and extreme feebleness of the limbs. Priessnitz, at his next visit, a few hours after, ordered two abreibungs, with an interval of ten minutes; then a foot-bath for an hour, the water being changed two or three times; next, a lein-tuch for 20 minutes, followed by the shallow tepid bath, in

which he was rubbed for half an hour by two attendants, with occasional affusions of cold water over the head. He now vomited freely, and this gave relief. The whole treatment was so successful, that, in another hour, he recovered sense and speech, and lost the pain of the head. In a few days, general treatment was resumed, and continued with great regularity. He was now always careful to take free exercise before and after every process. Numerous boils formed chiefly in the upper part of the back, but also in the thighs, and they supplicated favorably. He was called away suddenly by military duty, but pursued treatment at home to a certain extent; and a letter from him to Priessnitz, a short time ago, announced the complete recovery of his health.

#### CASE XXI.

A gentleman, æt. 18, slight and rather delicate, received a severe contusion in the perinæum and neighbouring parts by a fall from a horse; to which was attributed the formation of a fistula, and one of a complicated nature, attended with much ulceration and very severe pain and inconvenience. The surgeons wished to operate, but his father determined on taking him to Gräfenberg. Priessnitz directed an *abreibung* twice a day, and *unschlags* to the affected parts. In the progressive treatment were used *lein-tuchs*, plunging bath, and *douche*; and, at the end of a month, he obtained a perfect cure. The healing was complete.

This case cannot fail to interest the surgical reader. The symptoms had been of an urgent character; the bladder and rectum being affected with very painful irritation; and, at the commencement of the water-cure, the ulcerated parts appeared in a very unhealthy condition.

## CASE XXII.

A gentleman, æt. 60, had suffered many years from dyspepsia and general debility of the nervous system, with often universal pains, which were called both rheumatic and nervous. He was seized with hemiplegia; the right side affected. He got better for a short time, but had a severe relapse: was sent, after a time, to Toeplitz and Marienbad, but became worse. The mind and body were equally prostrate; the digestion was languid; the bowels wholly inactive without medicine or lavement. In April 1842, he went to Gräfenberg, in opposition to the advice of his physicians. Priessnitz prescribed, at first, two abreibungen in the day, and a head-bath for 15 minutes; and, as he became stronger, two lein-tuchs, omitting one abreibung, together with the shallow tepid bath. At the end of three months, boils formed in the head, arm, and leg, only on the affected side, from which evidently great benefit resulted. Neither plunging bath nor douche were used in this case. He received his health entirely at the end of seven months; nervous energy was restored; he had the power to climb the hills, to write his letters, and again enjoy his spirits in society.

## CASE XXIII.

A Russian nobleman, æt. 36, had reduced the vigour of his constitution by dissipation; and, on a severely cold day, at St. Petersburg, 10° below Zero, paid a visit of ceremony, insufficiently clothed. He had scarcely entered the room,



when he was seized with catalepsy, and appeared like a statue ! The ladies who were present were at first amused, thinking that he was acting ! but soon they took the alarm. He could not speak ; but, retaining his senses, made signs that he wanted water. He was affused all over from buckets, soon drank freely, and in less than an hour recovered his power of moving. But from this day he became an invalid, suffering especially from pain and nervousness of the head, with general debility and depression of spirits, also having severe indigestion. He was under medical treatment for two years, and visited Carlsbad, Toeplitz, and other baths in Bohemia, without any marked benefit ; then went to a water establishment near St. Petersburg. He used the vapor bath, as being considered preferable to the blanket, and after it the plunging bath for five minutes, followed by cold water lavement, all without taking exercise to produce reaction. The treatment was repeated, but so much disagreed that he soon left the establishment. He consulted an eminent physician, who advised another water-cure establishment ; but that he should first go to Kissingen for a few weeks, to improve the state of the digestive organs. He followed this advice. He thought himself rather injured than benefited by Kissingen. In the second trial of the water-cure, the shower-bath in a continuous mass was applied to the head for some minutes, eight days in succession ; he also used the plunging bath. His expression was that he thought he should have gone mad ; and, in despair, he quitted for Gräfenberg. Priessnitz gave him every encouragement, but thought mild treatment necessary at first : — for two days one *abreibung* and one *sitz-bath*, then two of each ; and in this manner for ten days, when he became stronger. He proceeded gradually to the use of active treat-

ment, but never to the fullest extent: the douche, once a day, was the strongest part of it. In half-a-year, he perfectly recovered, and was again in possession of his spirits and the use of his faculties, which had become impaired by the disorder of his nerves. He said he owed his cure to the superior method of treatment pursued at Gräfenberg, and to the fine mountain air.

#### CASE XXIV.

A superintendent of mines, æt. 24, had found his nervous system much deranged by the unwholesome atmosphere in which he lived; and at length experienced an involuntary discharge of prostatic liquor, and occasionally of seminal secretion from slight exertion, attended with pain in the spine and loins, occasionally severe. He was in a miserable state of nervous suffering, and went to Gräfenberg. For a considerable time he could bear only very mild treatment; yet, after four months, the discharges ceased. The pain remained, and also his feebleness. He douched and received the water particularly on the spine and loins. Boils and "dartres" formed near the seat of pain, and immediately gave the greatest relief. His recovery was complete in 11 months. It is unquestionable that the crisis in this case was highly advantageous. The boils suppurated favorably; and the pain, which had been of long duration, gradually passed away, and has never returned.

#### CASE XXV.

A gentleman, aged 33, having used mercury with great freedom, and been careless in exposing himself in unfavorable

weather, fell into a state of great debility and nervousness, and gradually became almost bald. He went to Gräfenberg in this state, and was described to look more like a corpse than a living person. His first treatment was a sitz-bath, two lein-tuchs, followed by a shallow tepid bath and free drinking of water. Afterwards, he sweated in the blanket, and used the plunging bath every other day; douching also on most days, but omitting one lein-tuch, and not using any on the day of the blanket. He drank water freely, and took as much exercise on the mountains as his strength would allow. Soon after his arrival, the few hairs on the head which he brought with him disappeared, and the baldness was complete. Boils formed particularly at the nates, and suppurated freely; when the treatment was reduced to the use of two lein-tuchs and a sitz-bath. Soon after, an eruption appeared over the whole body; first vesicular, and afterwards scaly, also more boils. The linen was stained with appearances which were supposed to arise from mercury. At the end of six months, he gained some colour of the cheeks, and became stronger; but also new shoots of hair appeared on the head; and which in two months more so increased, that when I saw him, two months later, he had a fine head of hair! He was pursuing regular treatment, and evidently was quite in a fair way of recovery.

During my stay at Gräfenberg, I heard frequent mention of the stains of mercury and of iodine appearing in the lein-tuchs, either of blue or reddish color; but Priessnitz assured my friend, Dr. Buxton, that he had seen mercurial globules issue at the ends of the fingers after a continued course of the water cure, in patients who had made a great



employment of mercury either internally or externally, or both, notwithstanding that they had desisted from all use of the medicine for even several years ! This appears almost incredible. I cannot doubt the veracity of Priessnitz ; and Liebig, with whom I discussed the subject, had no doubt of such a fact, and offered this explanation : that mercury combines with animal matter, and may remain so combined for an indefinite time ; and that the quick change of matter which belongs to the water-cure treatment would tend to the separation of the mercury, which might appear in a globular or other form.

I have witnessed examples of the latent stay of mercury in the system, and shall cite the following : I prescribed to a poor woman, afflicted with rheumatism of the wrist joint, threatening ankylosis, a mercurial ointment, which she rubbed in with only occasional intervals from January to the end of May. No mercury was taken internally ; none used externally after May. In November following, she was seized with the most violent salivation that can be imagined.

#### CASE XXVI.

A gentleman, æt. 24, of healthy appearance, when 12 years old, had a nervous fever, which exceedingly weakened his constitution and rendered him very deaf ; from that period, had been weak and sickly, and unequal to much exertion. When he arrived at Gräfenberg, four months and a half ago, such was his state, with a bad appetite and almost a loss of

smell. His hearing always very defective. Began treatment very gently with abreibung, lein-tuch, and sitz-bath; to drink water very freely and take abundant exercise. After a fortnight, his appetite and strength were improved; and treatment was increased to the use of the sweating blanket, followed by plunging bath twice a week. The douche on the other days; head-bath twice a day; and to sniff water freely several times in the day.

There ensued a critical diarrhœa several times, after which the hearing improved. When this diarrhœa occurs, boils seldom happen also. The sniffing of the water was at first disagreeable; but finding advantage from it, he persevered; and when I last saw him, his hearing and smell were both recovered. He was strong, active, and in good spirits.

#### CASE XXVII.

A young man, æt. 21, on his way to Gräfenberg, for the treatment of a rheumatic complaint, found himself unwell at Vienna, but travelled on, and, when he reached his destination, was in a high fever, with delirium. Until this was reduced, an abreibung was kept applied in the quickest succession; so immediately hot did the wet linen become. The delirium quickly subsided. When the fever was much abated, he was put into the lein-tuch, and this was followed by the shallow bath. Very soon a copious small-pox eruption appeared. Lein-tuchs were continued, according to the state of the skin. There was no return of fever; the appetite was natural. In ten days, he was able to walk out of

doors. He had been vaccinated in his infancy ; but, notwithstanding, the pustules were universal and of full size. No pitting ensued.

It is unquestionable that the water-cure treatment, applied in the beginning especially, is admirably adapted to the cure of eruptive fevers ; small-pox, measles, and scarlatina.

### CASE XXVIII.

An Austrian officer, æt. 60, had been very stout and remarkable for the goodness of his appetite ; but by degrees he became dyspeptic, very nervous, and, above all, lost his sleep more and more by degrees, till at length he was not able to procure more than one hour of dosing in the 24, for upwards of two years. He had no regular sleep whatever : opiates would not succeed, and he was in a most wretched state when he went to Gräfenberg. Three months passed away without any decided improvement. It was in the beginning of spring ; the weather very cold, and he was not strong enough to take much exercise. Hence a slower improvement. Treatment : in the first of the morning a lein-tuch followed by a shallow tepid bath ; an abreibung twice a-day ; usually a second lein-tuch, followed either by an abreibung or shallow bath. By degrees he improved, gained some appetite, and sleep returned, at first for an hour only ; then more and more, till, by the middle of summer, he could sleep comfortably for seven hours ; and he quitted Gräfenberg recovered from every inconvenience.



## CASE XXIX.

A gentleman, aged fifty, of the nervous temperament, yet appearing to have good muscular power, had lived many years in the West Indies, and become enfeebled in constitution by dyspepsia and complaint of the liver. On returning to England, he contracted rheumatic neuralgia, which principally affected the thighs and legs. They were morbidly sensitive both to heat and cold, not being able to bear the heat of the fire even at some distance ; and instant severe pains occurred on going into the cold air. The skin would not endure flannel. He wore wash-leather. His whole nervous system was so deranged that he could not bear the least mental application ; not even to write a letter. At successive periods he went to the two Wildbads in Germany, last to that in Gastein, and from both received benefit. The strong douche was used, and which acted so powerfully on him that he could not continue it. On his return home, he caught cold, and had a severe return of the pains. He was advised to go to Bath, and to use the baths of so high a temperature as 106° ! Instantly he found his head congested as if filled with blood, had singing of the ears, and a general distress. He left the bath quickly ; afterwards bathed at 102° to 100°, a few times, but thought himself much injured. On a subsequent occasion, he went to Buxton, and was much benefited. He was highly satisfied both with the baths and douche.

The water-cure treatment, however, attracted his notice, and he went to Gräfenberg about a year ago. He has pursued very regular treatment, has had several crises, and is materially benefited, but still has some returns of neuralgia.

He bears the douche and the plunging bath, and certainly is greatly improved in nervous energy; and is by no means so sensitive to heat and cold. For example, he bore the Gräfenberg winter, and could, when I saw him, take exercise in the sun. Priessnitz expected his cure to be completed in three or four months.

### CASE XXX.

An Austrian field-marshal, eighty-two years of age, had been a gouty martyr through a long life, and visited Gräfenberg four years ago, when in such a state of infirmity that he could scarcely put his feet to the ground. Mild treatment was used, but it proved sufficient to produce boils, which formed near the affected joints. He gradually improved, and finally threw away his sticks, walking and riding on horseback with almost the activity of former years.

An old Polish general, nearly eighty years of age, also received equal benefit from the treatment of his gouty sufferings and infirmity.

### CASE XXXI.

A lady, aged forty-three, of full habit, for a long time subject to menorrhagia to such an extent as to make her feel enfeebled, had much shortness of breath on exertion; with indigestion and disturbance of the head. A year ago had paralytic distortion of the face: this did not last. Had been upwards of four months at Gräfenberg. Treatment: lein-tuch in the morning early, followed by the shallow tepid bath. A sitz-bath, at first tepid, afterwards cold, twice a day, for twenty minutes, but not during the catamenia. At that period, the

wet bandage around the body was to be changed every half-hour ; but at other times, only when it should become dry. Such, with moderate drinking of water, was the principal treatment. Crisis (boils) formed on the legs ; and the discharge from them was considerable and continued. She obtained a favorable recovery, and the periods became satisfactorily regular. When I quitted Gräfenberg, she could ascend hills without difficulty, and was attentive to take regular exercise.

### CASE XXXII.

A young lady, aged nineteen, having been strong and healthy, was reduced to a state of great debility by a severe nervous fever, and became the subject of intense head-ache, attended with great depression of spirits. She went to Gräfenberg in October. First treatment : a lein-tuch twice a day, one sitz-bath, and one head-bath. Soon after, from exposure to damp evening air, she had a short feverish attack, for which eight abreibungen were applied on the first day ; followed by a lein-tuch. In less than thirty hours the fever was quite removed. Ere long, crisis (boils) formed in different parts, and from that time she scarcely experienced any head-ache. She drank water freely, and had umschlags, but never had stronger means used than I have mentioned ; and she perfectly regained her health and strength. When she arrived, she appeared, as I learnt, pale and very weak. On quitting, after five months' sojourn, she had a nice color, and was cheerful, strong, and active.



## CASE XXXIII.

A gentleman, aged twenty-three, not appearing delicate, of middling bulk, was undergoing treatment for deafness; after very slight preliminary means, he used the sweating blanket in the morning early. He was desired to go into the shallow tepid bath, before entering the cold bath; but he was disobedient, and at once plunged into the latter, on a severely cold day, when the temperature of the water was little more than 40° Fahr. On quitting the bath, he fell down insensible. Priessnitz was called to him, who directed the most free rubbing of the lower extremities with cold water, and then the shallow tepid bath, with abundant and universal friction, together with moderate tepid affusion over the head. He was quite restored in about an hour. This example shews how careful the patient should be to obey instructions, and not attempt to judge for himself when using the active processes of the water-cure treatment.

## CASE XXXIV.

A lady, aged thirty-two, disposed to corpulency and having a short neck, drank, on first rising, four pints or more of water, in a short space of time, taking only a slow walk in the garden. She was suddenly seized with an universal feeling of coldness over the chest and in the extremities, very quickly followed by insensibility. Her state appeared very alarming. Similar treatment to that mentioned in the last case was adopted, and with eventual success; but she was not quite restored till the expiration of twenty-four hours, and

for a long time after, she was reminded of the shock from which she had suffered. This case is sufficient to point out the infinite importance of taking active exercise when much water is drunk. Here, the kidneys had not acted. There was a temporary plethora of the vessels; and some effect must be attributed to the influence of the cold water as a sedative to the nerves of the stomach and first intestines.

#### CASE XXXV.

A gentleman, aged 34, was attacked, in the year 1828, with secondary syphilitic symptoms, having had primary disease seven months before, and which, he said, was very badly treated. He exposed himself carelessly during the use of mercury. Afterwards measures were used with apparent success, for he got and remained pretty well for several years. At length, no fresh cause having existed, a swelling appeared on the forehead, painful, persisting, and resisting all treatment. He went in the summer of 1837 to Aix-la-Chapelle, and used the baths with only slight advantage. An abscess formed in the forehead and was opened. No healing process afterwards. He continually grew worse. Twenty months ago he went to Gräfenberg; then having three foul ulcers, deep and each the size of a sixpence, attended with deep-seated pains and often prickings near the surface. He had also a painful node on the shin of the left-leg. His constitution was much weakened, and I was told that his appearance then was alarming, from the signs of exhaustion and distress. He was without appetite, and procured but little sleep.

Pricssnitz ordered a lein-tuch, followed by a shallow bath, morning and afternoon; a sitz-bath for half an hour in the middle of the day; and wet cold-water compresses, not covered

by dry, to be applied to the ulcers, and changed ten times a day. Waist bandage; and to drink water as freely as possible.

After three months' treatment, exfoliation of a large portion of the entire cranium, exposing the dura mater, took place. I am in possession of this. When I saw the patient, smaller portions were in process of coming away. Notwithstanding this, he appeared in a fair way of recovery, for he was improved in strength sufficiently to walk two miles; appetite and sleep were good; the granulations were healthy, and the whole complexion of the case was changed very greatly indeed for the better. It is one that renders a valuable testimony to the efficacy and simple character of the water-cure treatment. So much of the dura mater will be eventually exposed, that he will require some ingenious instrument to be worn for the protection of the brain.

#### CASE XXXVI.

A gentleman, between forty and fifty years of age, was suddenly seized with all the symptoms of inflammation of the brain; pain of the head, with urgent feelings of congestion appearing at the outset, a hot skin, great excitement, and very quickly strong delirium. The attack was met by active measures; the rubbing down in the shallow tepid bath, and small affusions of cold water for several hours in succession; and when the violent symptoms were subdued, lein-tuchs were used, followed by the further use of shallow bath and affusion. This was the chief treatment, and the recovery was quite accomplished in two or three days. By ordinary proceedings, it is not improbable that more than as many weeks might have been required. Both Captain Claridge and Dr. Wilson relate similar cases to this, treated in the same manner, and with equal success.



## CASE XXXVII.

A gentleman, aged 25, was affected from his earliest youth with dyspepsia, and attacks of head-ache from various exciting causes, attended with heat of the scalp, flushings of the face, and a distressing sense of the vessels of the head being too full of blood. He had been under treatment several weeks with advantage. One afternoon, his dinner not digesting well, he took a very long walk, and, during it, was seized with a strong pain between the lower ribs, affecting his breath. It was with great difficulty he could reach home, so urgent did the spasmodic pain become. Priessnitz saw him immediately, and directed the shallow tepid bath ( $60^{\circ}$ ), with abundant rubbing for two or three minutes, instantly followed by the cold plunging bath ( $44^{\circ}$ ), in which he remained longer than usual, in order that the cold might make more impression on the spasm; but, also, this alternation of tepid and cold process was repeated no less than four times, till at length his limbs were quite benumbed, and to a degree of much suffering. The pain of the side was relieved. He was next exceedingly well rubbed; put to bed, became warm, went into a sleep; and, after an hour or two, awoke perfectly recovered. I know that this was a muscular pain connected with indigestion and intestinal flatulence. I have several times experienced it, and found it removeable by simple means; as quietude in the recumbent posture, warmth, and a carminative in warm water. In this instance the treatment was out of proportion to the occasion. I suppose that Priessnitz apprehended internal inflammation. I take the liberty of thinking that it was an error in diagnosis; the knowledge of which is always so important in the administration of any

kind of treatment. I saw this gentleman immediately after his recovery, and received from him a very minute account.

#### CASE XXXVIII.

A lady, aged 30, brought on a state of extreme nervous debility, with impaired digestion, head-ache and confusion, with loss of sleep, depression of spirits, and many other nervous symptoms, by a course of severe literary application. She had the highest medical advice in London; but, although relieved in her most troublesome symptoms, she continued in a state of such great debility, that she could not walk across the room without assistance. She tried change of air and scene without success; and, as a last resource, went to a water establishment in England. An abreibung twice a day, and sitz-bath once, with body bandage, and free drinking of water, constituted her treatment. In three weeks, her amendment was such as to enable her to walk out of doors; and after a few months, she was strong enough to travel. She felt convinced that her nervous debility required further and most skilful treatment. She arrived at Gräfenberg shortly before I quitted; and she was in good spirits with the prospect of her perfect recovery.

#### CASE XXXIX.

Miss —, æt. five years, a child of nervous temperament, first suffered, four years ago, from a painful inflammation of one knee, appearing otherwise in good health. Leeches and

evaporating lotions were applied freely ; and afterwards repeated blisters. At a later period, malt and hop baths at 88° Faht. for one hour at a time, two or three times in a week, in alternation with warm salt water. She had been at Gräfenberg about 15 months. When she first arrived, she could not put the foot to the ground, and used crutches with difficulty. The knee was painful in stormy weather. I examined the joint, which was evidently diseased from scrophula. There was still enlargement ; but I was told by the nurse it was very much reduced in size ; and this indeed was manifest from the loose state of the skin. It was almost free from tenderness. There was some motion in the joint. She could walk very nimbly without a stick or any assistance ; first moving on the heel, then on the toe. The limb was shortened and the tendons of the ham were contracted ; but the improvement was very satisfactory. She had been delicate and weak. She was become strong and healthy. The case is so important that I shall particularise the treatment.

At six A. M. the lein-tuch for an hour, followed by a shallow bath at 64° for five minutes ; wet bandages to the waist, and around the knee covered as usual : to go out before breakfast, and drink three small glasses of water. At nine, the knee was rubbed for five minutes with the wet hand, and wet applications were again put on. At 11, repeated, and a sitz-bath for 10 minutes. At one, P. M. the local treatment and waist bandage. At half-past two, same treatment. At four P. M. sitz-bath for 10 minutes ; temperature at a later period reduced to 60° ; the knee again rubbed with cold water and a bandage re-applied. At five P. M. lein-tuch and shallow bath, which also was reduced in temperature by degrees to 60°. Local treatment repeated. Since last June she had



douching at 11, and omitted the sitz-bath; but when the weather proved unfavorable, this treatment was reversed.

#### CASE XL.

A little boy, aged five years, of calm disposition, when two years old had a fall, by which the knee was injured. This, like the last, was a serophulous enlargement of the knee-joint. He was just arrived at Gräfenberg. The leg was drawn up two inches from the ground. Priessnitz observed that the tendons were so contracted and rigid, that a division of them by the surgeon would become necessary, but he would treat the enlargement of the joint. The treatment directed was, a lein-tuch for half an hour three times a day, followed by shallow tepid bath with local application of water, and the drinking of water, as in the last case.

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Having related, I believe, a sufficient number of cases to display the powers of the water-cure treatment, I shall only add to their number by alluding, in a cursory manner, to a few other examples, the details of which would require more space than I can afford on the present occasion.

I witnessed two cases of incipient inflammation of the lungs, with much inflammatory affection of the throat, and of the mucous membrane of the trachea, promptly and successfully treated by abreibungs, lein-tuehs, tepid shallow baths, and umschlags.

In a case of hæmoptysis, it was evident to me that the free drinking of the water had proved injurious; although in other respects the general treatment had been very useful.

I am convinced that in this disorder the patient should be even painfully restricted in the quantity of drink. I should prescribe iced water, in very small quantities at a time, as almost the only beverage ; and the same principle of management I should observe in any case of arterial hæmorrhage.

I witnessed many urgent cases of disease of the skin, various in their nature. They were chiefly impetiginous or herpetic. *Dartres* is the common name assigned by the foreign patients to most of the eruptions.

One of the worst examples of lepra that I ever saw presented itself to me in the case of a gentleman, 23 years of age. It was universal from head to foot. He had been at Gräfenberg one year ; and for a long time had been on full treatment, using the douche every day, and sweating in the blanket three times a week, with other processes. He considered himself to be very materially improved : the patches were much less scaly than formerly ; and in various parts the skin had assumed a healthy cicatrised appearance. Priessnitz told him that in these cases the water treatment prospered most during the spring. He expected to be successful in the cure. There is no description of cutaneous malady in which, according to my experience, it is so difficult to be effected. This patient had formerly taken various mercurial and other alteratives ; had been at Carlsbad ; at Gastein in Tyrol ; and at Kreuzenach, a celebrated place for diseases of the skin.

I believe that the water treatment is more adapted than any other to the relief or cure of obstinate diseases of the skin. The continued frictions, ablutions, perspiring processes, douches, &c. must have a powerful influence in exciting an entirely new action of the vessels of the skin ; but in any case in which, after a fair trial, the water means did not seem

competent to meet the evil, I should not hesitate to add the use of some mild alterative. I saw many cases of scrophula, some of which were materially benefited. In others, it was doubtful whether any improvement had been effected.

In the melancholy diseases of tetanus and hydrophobia, I should consider the employment of the most active of the water-cure processes well deserving a trial. Priessnitz assured me that he had cured a dog of hydrophobia by incessant douching with the coldest water. Many years ago, one of my horses was seized with locked jaw, and the poor animal appeared to be fast approaching to a hopeless condition, the farrier having exerted all his skill in vain. The late Professor Coleman by chance arrived at the time, and advised repeated affusions of the spine with the coldest water from buckets. After about an hour, according to my recollection, the spasms of the jaw and of the several affected muscles became relieved. A complete recovery ensued. I have thought it not unbecoming to relate these comparative cases.

#### GENERAL OBSERVATIONS.

I trust that in the preceding pages I may have redeemed the expectations I held out in my preface, and shewn sufficient cause to justify my approbation of the principles of the water-cure treatment, and my recommendation of the system to the best attention of the profession. It is my wish to speak of it rather as a valuable addition to the resources of medical art, than as its offensive rival or foe. It is very true that my representation of hydropathy gives it pretensions of no small extent ; yet they have many and important limits. Every



day presents cases in which the whole system of treatment is not applicable; and the following diseases may be enumerated in the exception. Confirmed consumption; confirmed epilepsy; apoplexy, or a threatening tendency to it; inveterate scrophula; all serious diseases of structure; cancer; the maladies of infirm old age; certain states of great debility; and some other conditions of aggravated malady. I ought, however, to observe that in the first stage of consumption, or rather when its earliest threatenings are disclosed, certain parts of the treatment can be employed with the greatest advantage; and, even in the onward stages of this melancholy disease, I have seen rather more than palliative effect result from using two or three of the processes. In chronic bronchitis, the practice to a certain extent is very useful.

It is an interesting consideration how far advantage may be taken of the water-cure in city or town, without going to a water establishment? It appears to me that in all the acute disorders, the various fevers and inflammations, or certain spasmodic attacks, in which its adoption may be held expedient, it would be as available in city or town as in the country; in a street as on the mountain top. In the circumstances of highly excited circulation with burning skin and great disturbance of the sensorium, exercise with the treatment would manifestly be improper; and I am certain that here we might employ cold water in its different suitable modes to act as a refrigerant, evaporant, and sedative, with the utmost propriety; and by a skilful use of this powerful agent be enabled to cut short an inflammatory disease, somewhat as we would extinguish fire. In such acute diseases as I am now alluding to, the water treatment would be quickly brought to a conclusion. We might think it necessary or judicious to combine with it

some employment of medicine, and especially to meet particular symptoms. In chronic disease a different view is to be taken. I do not mean that even here every part of the hydropathic measures are to be prohibited to the town inhabitant ; but it is obvious, on the least reflection, that in any case in which the full treatment is required by the long fixture of the disease in the system, all the adjuncts which I have before mentioned, of the purest water, the finest air, all temptations to abundant exercise by beauty of country, with regulation of diet and regimen, must be comprised, in order that the patient may have the best opportunity of obtaining a cure. It is always the aim of Priessnitz to eradicate the disorder from the system and effect a complete cure, not being satisfied with a temporary amendment ; and hence such patience is required on the part of the invalid, that he must not reckon time too anxiously. The question naturally presents itself to the physician, cannot the period which appears to be required for the success of the water-cure treatment in long-standing diseases, be abridged by the assistance and co-operation of medical means ? At Gräfenberg, the answer is given by the positive revolt against all use of medicine ; and, indeed, as relates to mercury and iodine particularly, it is the professed object of Priessnitz to expel these poisons from the system with almost as much solicitude as he seeks to eradicate disease itself. A devotee of water, he has afforded us the opportunity of seeing fully what water-treatment alone is capable of effecting ; and so far we have been taught by a non-medical person what we could not otherwise have learnt. The extraordinary length of time which, in numerous cases of chronic disease, Priessnitz requires for the stay of the patient, must often be matter of regret, from the inconvenience of the sacrifice ; and hence the ques-

tion again arises, can the period be shortened with propriety by joining the influence of some mild medicinal alterative in a manner not inconsistent with the full use of the water processes? In many of the establishments conducted by medical proprietors, if not in all, I know that medicine is occasionally employed. This is certain, it should not be officiously used; and I am convinced, as a general statement, that it cannot often be required. The administration of medicine is the exception, not the rule. On the other hand, it is not necessary to suppose that the water-cure is so perfectly understood in all its parts as not to admit of any improvement.

In regard to the opposition of a great part of the medical world to this innovation on the ordinary practice of physic, looking at human nature, we must attribute a little of it to its interference with settled interests; but with the respect which I entertain for my profession, I am of opinion that a higher, a nobler principle is usually exercised, and that a sincere desire is felt to protect the public from a supposed danger, or cause of injury. It is, therefore, with a due regard for such laudable feelings, and to those of an inferior nature I shall pay no attention, I am desirous to give the most searching inquiry into the principles of this new treatment; and to gain converts to it by convincing the judgment, instead of misleading the imagination. With this view, therefore, more remains to be said on this subject than I have yet offered.

In examining the cases which I have related, the great amount of treatment, the various processes used almost from hour to hour, and continued from day to day, from week to week, and from month to month, we must at once perceive the



great influence necessarily produced upon the whole animal œconomy; not in an insulated manner, upon any particular organ; not upon one order of blood vessels, or other description of vessels distinctly; not upon separate parts of the nervous system; but that by means of strong impressions produced on all the living functions, and of chemical actions taking place within the body in connection with vital force, the great change and effect is produced. I object, therefore, to partial explanations of the *modus operandi* of the water-cure treatment.

Hence it is that I wish to receive with caution the doctrines of Liebig, as bearing on the present question, if attempted to be used as chiefly explaining the question which I am now discussing. It is with diffidence, and with deep respect for this profound chemical philosopher, that I venture to offer a few remarks. I cannot resist the conviction that, however much we may render our attention to the ingenious reasonings which belong to this modern chemistry, we are bound to keep in view the higher importance and still greater influence of vital force and nervous energy, as compared with simply chemical action; or, at least, we must always view every chemical action and process in the human body as intimately united and identified with the vital\* function, which is itself very complicated in its nature, and too mysterious indeed for our perfect comprehension.

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\* As a proof that the vital power of vegetables has an influence upon their secretions which is not explained by modern chemistry, it may be mentioned that bamboos, canes, the corn plants, and some others, are covered with a thin epidermis, consisting of pure flint or silica, which is evident from analysis! The stems of these plants, when burned, will produce a vitreous substance, arising from the fusion of the silica which they contain. This is indeed a wonderful chemistry of nature, in connection with vital action.

Liebig observes, “ the act of the waste of matter is called the change of matter. It occurs in consequence of the absorption of oxygen into the substance of living parts. This absorption of oxygen occurs only when the resistance which the vital force of living parts opposes to the chemical action of the oxygen is weaker than that chemical action ; and this weaker resistance is determined by the abstraction of heat, or by the expenditure in mechanical motions of the available force of living parts.”—“ *Disease* occurs when the sum of vital force which tends to neutralize all causes of disturbance (in other words, when the resistance offered by the vital force) is weaker than the acting cause of disturbance.”

“ In medicine, every abnormal condition of supply or waste in all parts, or in a single part of the body, is called disease.”—“ The globules of arterial blood, in their passage through the capillaries, yield oxygen to certain constituents of the body. A small portion of this oxygen serves to produce the change of matter, and determines the separation of living parts, and their conversion into lifeless compounds, as well as the formation of the secretions and excretions.”

It is evident that chemical action—pure chemistry—does play a very active part in the various processes of the human body concerned in its waste. But let us always carefully keep in view that it is subservient to a higher department of function, vital force, namely, which is again connected with and largely depending on the nervous principle, or energy, as we may choose to term it.

Our bodies are always undergoing change by means of the removal of old and deposit of new matter ; but it takes place so slowly as to be imperceptible to our senses ; except that it is more manifest in growing children ; for in childhood, as

Liebig observes, "more is supplied than wasted." When so much excitement is given to every function of the body, as in the full employment of the water-cure treatment, we cease to be surprised at the great effects which are produced. Liebig observed to me in our conversation: "By means of the water-cure treatment a change of matter is effected in a greater degree in six weeks than would happen in the ordinary course of nature in three years."

Hence arises an additional reason why a good judgment is required to proportion the amount of treatment to the constitutional powers of the individual. It is pleasing to observe the kind of change which is produced on the body by the pursuance of the water cure for a sufficient time.

In its favorable progress, the physical condition of the patient improves in an evident and sensible manner. The skin, from being pale or sallow, acquires a ruddy hue; the muscles become fuller and firmer; fat decreases, and many are glad to lose a corpulent abdomen. In young growing persons, it is soon made visible that the capacity of the chest increases; whence, the lungs have fuller play and a brighter bloom appears in the cheeks. Exercise, at first a difficulty, now becomes a pleasure. The mind partakes fully in these benefits of the body; the senses become more acute; the faculties more energetic; and buoyant spirits take the place of languor, depression, and ennui.

I have to address some observations equally to the timid and the bold. Many, on hearing the subject of the water cure mentioned, shudder with horror, and think it another name for certain danger or sudden death. Others, on the contrary, view it as too simple; think the process cheap and easy, and desire to treat themselves.



The separate employment of any one of the processes may not suit the taste and feelings of the individual, but cannot be considered unsafe, unless used under improper circumstances. The shower bath, or plunging bath, or douche, may not be appropriate to a case; but who would speak of either as dangerous, in a general sense? The rubbing down with a wet sheet (*abreibung*) is a far milder proceeding than any of the other three modes of applying cold just mentioned. I daily made diligent inquiry at Gräfenberg whether accident ever happened from any part of the treatment. I have related all the casualties which I could hear of. How few are they!—and those few attributable to the errors and carelessness of the individuals, and throwing no deserved reproach on the water treatment itself.

On the other hand, the practice is not to be lightly undertaken by invalids; and it is only the voice of kind warning to say that they ought not to attempt self-treatment. So called local diseases, but which are really constitutional, require general treatment. I heard lately of a gentleman treating his knee, affected with a rheumatic inflammation of the joint, by cloths constantly wetted with cold water, without employing any constitutional measures. Within thirty hours a fatal metastasis to the brain took place!

The agreement and good effects of each and every process depend on nice and correct management. How much more then of the whole systematic treatment! A competent bath attendant is of the greatest importance. There must be, in order to success and the avoidance of accident, a good head to direct, and a good hand to execute.

I much fear that, from the facility and apparent simplicity of the practice, and the temptation to pecuniary gain, persons

without the qualification of medical education will be induced not only to form water establishments, but' conduct them altogether, and boldly undertake the responsibility of the public health. In no illiberal spirit, but from honest feelings, I protest against this monstrous pretension and error. Diagnosis is most essential. Who that is untaught and inexperienced can understand the different kinds and the many phases of disease? and without such discrimination, and also judicious estimate of the powers of the individual to bear treatment, how can its amount be properly prescribed? A second Priessnitz, a man of so much original genius and powers of observation, with so vast an experience derived in so extraordinary a manner, is not perhaps again to be found; and I hope, therefore, that his example will not be considered a precedent that hydropathy shall be practised by other persons wholly unacquainted\* with either the exterior or the interior of the human body, and the complicated functions of the animal œconomy.

The *principles* of the water-cure treatment are, I am sure, founded in nature and truth, and rest, therefore, on an immutable basis. The *practice* may be occasionally abused, and then evil, instead of good, result. If I could think that such a consequence was necessary, I would not for one moment be its advocate. But, convinced as I am that we have

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\* The partial exercise of hydropathy by benevolent persons, or the half-working of the system in incomplete establishments, do not come within the whole force of my criticism. There is as much difference between using the water treatment on a small scale in this manner, and the employment of the complete system as practised at Gräfenberg, as between taking two or three doses of medicine, and undergoing an active course of strong remedies. In the little way of treatment, there would not be much risk of doing harm; but a cure of important disease could scarcely be effected. I confess myself disgusted with any prospect which holds out the idea of treating cancer with success!

in our power a new and most efficacious agent for the alleviation and cure of disease in various forms ; and, in proper hands, as safe as effectual ; I should be no friend to humanity, nor to medical science, if I did not give my testimony in its recommendation.

The established practice\* of physic is not to be set aside, as some enthusiasts at Gräfenberg would declare !—it would be absurd to think of it ; but if the occasion for the use of medicines can be lessened, there must be a consequent increase of human comfort. Besides, the inadmissible diseases for the treatment, convenience, as well as preference, will induce the large majority every day to meet their ailments by medical help, rather than by hydropathic means. Not that my present inquiry relates to mere policy, or partial interest of any kind :—no ; it is one of deep and important truth ; and to which I desire that justice should be done.

Hitherto, I have been considering the value of the water-cure treatment for those who can make their choice of means ; and can command every comfort in health and sickness.

Before I leave the subject, let me treat of the poor and needy who are afflicted with disease, and under so many forms of suffering that might be treated by hydropathy with certain success. I appeal to the rich and the benevolent to take into consideration the practicability of forming a Hydropathic Hospital, in a healthy locality in the vicinity of London ; where the greatest good might be rendered to suffering

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\* An invalid of rank, at Gräfenberg, had adopted the water-treatment on account of an obstinate intermittent to which he had long been subject. It returned occasionally, even in the mountain air. In a severe attack, the water processes were employed, as usual, for the relief of the paroxysm ; but his physician, who was domesticated with him, did not hesitate to give him free doses of quinine, in order to prevent the return of the ague ; and the result was most satisfactory.



humanity, at a smaller cost probably than hospitals in general can be conducted.

It will be a fortunate circumstance for the public health, if the increasing popularity of hydropathic principles should lead to a more familiar and regular use of some mode of bathing or free ablution amongst the community, the lower orders especially, than has hitherto existed. The number and severity of skin-diseases would become materially lessened. But also, when we render health and tone to the skin, we almost close a large avenue to numerous forms of disease.

Small parts of the hydropathic treatment are applicable for every-day use, to all constitutions, and to persons of every age; and the practice of which, in conjunction with temperance, could not fail to produce the most important and happy results for the welfare of the rising generation.

The water-cure patient, who may have been blessed with recovery from disease and long suffering, should be mindful of all the rules of Hygeia for the rest of life. If he relapse into the same errors which may have led to his loss of health, has he any right or title to expect a permanent cure?

In reflecting upon the virtues of water as a remedy, when properly applied, for the alleviation or cure of many forms of disease, we find another occasion of gratitude to the Great Creator, who has in his beneficence provided so convenient an antidote for numerous evils which "flesh is heir to."

The careful study of Nature is essential to the making of a physician; and he who attentively follows her precepts will the most readily be conducted to a knowledge of disease, and the rational method of cure.

*Naturæ præcepta colit, morbosque medetur,  
Filaque Parcarum lentius ire docet.*

## APPENDIX.

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*Visit to Professor Liebig.*—In company with my friend, Dr. Buxton, I made a long detour from Fulda to Giessen, for the sole purpose of paying a visit to Liebig\*, and learning the sentiments of that distinguished chemical philosopher on the subject of the water-cure. We had the satisfaction of enjoying a long interview with him; and I owe him great acknowledgment for his exceeding courtesy and kindness on that occasion. He had formed a high opinion of Priessnitz and his system. I have already detailed many of the observations† which he made. He comprehended the great rationale of the treatment of chronic disease in a few words, “change of matter;” and thus the removal of morbid matter, and the substitution of new that is healthy. “But,” he added, pithily, “there are other modes, the continued use of purgatives; and a walk to Milan.”

I am well convinced, from long experience, that, in the distinct use of medicine for important chronic diseases, the persevering use of alteratives and aperients comprises the only effectual method of cure; diet and regimen also being regulated. In this way I have been often successful in the treatment of the more aggravated cases of chronic gout, chronic

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\* The university of Giessen must owe much of its present celebrity to Professor Liebig. It is beautifully situated, and has all the advantages of quiet shades for close study and reflection.

† On referring to my notes, I find that I may have mistaken the expression which he used regarding his opinion of a larger quantity of oxygen being contained in the air possessed by pure spring water than in that of the atmosphere; and I wish, therefore, the word “atmospherical,” l. 21, p. 22, to be omitted.

rheumatism with sciatica, chronic hepatitis, and other maladies which had taken their deep hold of the system. Let it not be supposed, therefore, that I lose my respect for the practice of physic in the approbation which I bestow on the new system ; but I do very deliberately declare, that there are states and conditions of disease, especially those of a gouty and rheumatic nature, in which I would prefer the water-cure treatment to any other ; used either distinctly, or in alliance with some medicine. The “walk to Milan” reminds me of the physician who sent a nervous patient to a very distant part of Scotland, on the pretence that he would there find one who was particularly successful in his description of case. He searched for him in vain, and on his return vented his displeasure on the physician for the cheat ; but he was cured !

We conversed on the subject of diet. Liebig remarked that coffee impeded the digestion of the food for an hour or two, its carbonaceous principle requiring oxygen ; that green tea should be looked upon as poison. He was himself much in the habit of taking black tea ; but, for the water-cure, considered milk and water the fittest beverage, morning and evening, and that no wine should be used ; water only. When he wished to study for a continuance, he took coffee, to delay the return of hunger. The smoking of cigars he condemned as prejudicial to health, much gaseous carbon being injuriously inhaled, and unduly robbing the system of oxygen.

*Visit to Boppard.*—Our next visit was to the Hydrotherapeutic establishment of Marienberg, close to Boppard, on the banks of the Rhine, conducted by its proprietor, Dr. Schmitz. From that gentleman we received the utmost politeness, liberality, and kind attention. He shewed us over



every part of his establishment ; and was minute in his explanations. I had been told that it was the handsomest in Europe, and I saw every reason to believe it. . . . From the greatest arrangement to the least, order, beauty, and neatness, were alike displayed. The mechanism in the construction of the various baths was highly ingenious, particularly that used for sitz-bath and for the shower douches. There was, indeed, much worthy of imitation. I should think that about two thirds only (at most) of the amount of treatment are used at Marienberg, as compared with that at Gräfenberg—Upon this difference I shall not comment. I asked Dr. Schmitz whether he gave medicine? He said, “ Yes, I am a physician, and do so when I see occasion, which is not frequent.” To weak patients, standing in need of, or desiring the indulgence, he allowed chocolate for breakfast, and one or perhaps two glasses of wine\* after dinner ; but they must practise this deviation from the general rule in their private room, not at the table d’hôte.

Dr. Schmitz was anxious that I should know the true particulars of the case of a late much-lamented reverend gentleman, from the neighbourhood of London, whose death had been attributed to the water-cure treatment. I shall now present the exact statement with which he has favored me : —“ This gentleman came to Marienberg at the beginning of September, 1841, with diabetes mellitus, after having undergone much medical treatment in England, and visited different mineral baths without any benefit. Several of his relations had died of the same disease, and he himself had suffered

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\* It is habit, so much more than necessity, which prompts us to take wine daily at dinner. For six weeks at Gräfenberg, and afterwards, I drank water only, and did not suffer any inconvenience from the privation. Shortly after my arrival, I was invited to a dinner party of twelve, where water only was the beverage. I was never in more cheerful society, or where the conversation was more animated.

from it for 16 years, it having begun while he was in the East Indies. He was in a state of extreme debility, reduced almost to a skeleton, constantly feverish, with an alarming diarrhœa; the skin very dry and harsh, not performing its function of secretion; during the first few days, the urine passed in 24 hours amounted to 15 quarts, although at this time he was not drinking more than five or six pints a-day. Articles, moistened with the urine, presented, on drying, a light, white powder, sweet to the taste, but without smell. Considering that the feverish excitement caused by the depressed vital power, and increased sensibility, should first be combated, and the nutritive process aided, before the nervous and secretory systems could be successfully attacked, I endeavoured to oppose the present symptoms by a suitable diet and the external employment of water, at first lukewarm, but daily using it somewhat cooler. For breakfast, the patient had chocolate (from which the cocoa oil was expressed), with eggs; for dinner, strong soup, in small quantity, with a small portion of vegetables and roast meat; for supper, soft eggs and compôt; and drank, in the course of the day, 10 or 12 glasses of water (smaller than the glass of Priessnitz, containing half a pint each). Early in the morning, the bed-clothes were tucked up tight about him, so as to retain the animal heat, that, by thus remaining for some time, the skin and nerves, supplying the periphery of the body, might be called into action, without excitement of the organs of circulation. This operation was undergone thrice a day, followed each time by an *abreibung*; and, in addition, he took a *sitz-bath*, for ten minutes, twice a day, at first at 20° R. and gradually decreasing in warmth to the temperature of the water here, 8° R.\*

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\* " This water has been at various times tried with the thermometer; it does

“ By the 8th of September (four days after beginning the treatment), a great improvement had taken place ; the feverish state had disappeared, the pulse being 75, and a considerable increase of physical power was manifest, and felt by the patient.

“ On the 15th, he drank with pleasure 20 glasses of water† and four glasses of milk, which he preferred to chocolate ; and notwithstanding the amount of urine passed was only 12 pints a day, it was clear, and its natural urinous smell was again perceptible. He went on thus wonderfully improving ; and at length, perspiration, of a peculiar character, appeared while he was packed up ; and, in addition to the above treatment, the douche was occasionally employed for from half a minute to one minute each time.

“ On the 10th of October, there appeared on different parts of the body furuncles (boils), and were, on the 22nd, accompanied with feverishness. The patient was sensible of his continued increase of strength, and diminution of the quantity of urine passed ; and equally regretted being obliged by circumstances to return to London. Mr. Mayo, myself, and others, joined in earnestly representing to him the great danger of such a journey in his present critical, but otherwise highly favorable

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not vary summer or winter, being on the average, perhaps, 3° Faht. warmer than that of Gräfenberg‡ ; and the pipes, bringing it, lying from four to eight feet deep in the earth.

† “ This water is free from all foreign substances, except much free carbonic acid and carbonate of magnesia, in small quantity.”—*Dr. Schmitz.*

‡ The difference is much greater : I found the temperature of the spring at Gräfenberg 44°, of Marienberg 54°. This situation near the Rhine is much milder for the winter than Gräfenberg ; but less bracing in other seasons. I found the temperature vary much at Gräfenburg during my stay ; on the day of my arrival in April, 60° ; for three days in the early part of May, 29°, and at the extreme end of the month, 62°.



condition, feeling, as I did, the certainty of a fatal termination if he persisted in this plan ; but to no purpose, for he left on the 25th."

I am unacquainted with the exact particulars of the progress of the case, or how soon it came to a fatal termination ; but Mr. Mayo, with whom I conversed on the subject, and who certifies the accuracy of the present statement, told me he felt confident that the journey must in all probability prove fatal ; that the improvement in the first instance which he had witnessed was quite surprising, and he believed that the boils would have proved highly useful, had the unfortunate patient remained quiet and followed up the water treatment, with modifications suited to the altered circumstances of his case. It must at once appear evident to every dispassionate reader that this catastrophe ought never to be quoted to the injury of the good name of hydropathy.

I am happy in the opportunity of meeting with my friend Mr. Mayo, whom I had attended occasionally in London, when suffering most severely from chronic rheumatism. I was extremely gratified to find him in a satisfactory state of improvement. Formerly, the knees and hands were inflamed, swollen, and painful, so that he could never obtain rest without the aid of a large dose of opium. He then suffered also very much from the inflammation and rigidity of the muscles and ligaments of the neck. Upon examination of the knees and hands, I found them perfectly free from all sign of inflammation, and reduced to their natural size. They were not tender to the handling ; but Mr. Mayo was still apprehensive that if he tried to walk, he might bring back inflammation of the synovial membrane. The neck was in a much better state, but still stiff. He had, from circumstances,

suspended the greater part of treatment during the winter, to the regret of Dr. Schmitz, who thought that if he could have been more assiduous, he might by that time have been restored. The patient himself was, however, satisfied with his well-doing, and praised the water-cure as having saved him from being a cripple. He was in good general health and spirits, and full enough of energy to take charge of the health of others.

I asked Mr. Mayo if, during his observation of the water-cure treatment, for upwards of a year, he had ever witnessed any accident to occur from it? He assured me, not a single one; and that carbuncles did not take place as is supposed, only boils. He added, "this new system of treatment more than doubles our power of doing good. Of course it will meet with much opposition; but none, come from what quarter it may, can possibly prevent its progress and its taking firm root. It is like truth, not to be subverted."

*FINIS.*

